The Journal of the
American Medical Association

Vol XXI CHICAGO, SEPTEMBER 23, 1893 No 13

ORIGINAL ARTICLES

INSANITY AMONG CONVICTS

Read in the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

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The few cases here presented illustrate some of the types of insanity found among persons convicted f crime

I do not believe the fact of their being convicts influences the insanity in any way, but because of the conditions under which they have been raised, and the selection practiced by courts, the most degenerate classes find their way into prison and thus come to our notice

Very often superficial observers accuse this or that mode of imprisonment as predisposing to insanity As well charge the almshouses with breeding idiots because the mentally defective are found in them

The separate system or cellular plan, as practiced in the penitentiary for the eastern district of Pennsylvania has been accused of driving men insane, and year after year this charge finds its way into print

There are insane prisoners in that institution—some sent there because of their insanity, others whose insanity was not recognized before they were admitted, and some who have become insane during their imprisonment Insanity exists in about the same ratio in other prisons and among the same classes, outside all penal institutions

When we consider the avenues and factors that lead to insanity—syphilis, chronic alcoholism, hereditary defects and the social history of the great mass of prison population, we wonder that insanity is not more frequent among them

Case 1—White male, aged 38, native of Germany Family history negative Childhood uneventful At age of 14 was hit on the head with an iron instrument causing a depression of skull yet visible, and a discharge of pus at the time of the injury Was arrested in Germany for quarreling and while in prison had an attack of probable mania Was arrested in New York city for assault and battery and pronounced insane and sent to an asylum a' Newark, N J His wife obtained his release but he was subsequently returned for abusing her After the death of his wife in 1889, he had intercourse with his 12-year-old daughter, as he claims while under the influence of liquor For this crime he is now serving a sentence of five years He was regarded as insane on admission, and his conduct since has corroborated this opinion He believes himself Christ, God, a poet, writes Bibles, revises them, makes crowns out of paper, talks fluently, though not incoherently Has periods of excitement during which he is homicidally inclined

Case 2—White male, age 44, native of the United States Mother committed suicide and he was reared by strangers Has been arrested six times for larceny, highway robbery and assault and battery, serving in all some eight years in prisons He is now serving his second term here While serving his previous sentence here he attempted suicide by cutting his throat because some of the other prisoners teased him During his present term he has behaved well—has been constantly in separate confinement—answers questions readily and intelligently, has hallucinations of hearing his neighbors speak ill of him and putting spells on him so that at times he can not eat or sleep He believes himself to be an executioner and obliged to "desassinate" people when their time comes He claims that he has put away 3,000 people by striking them on the head or stomach

He expresses his views as follows "To kill a man through malice, that is murder, to kill in self-defense is manslaughter but he is obliged to kill because the court says so" He sleeps well, always turns out his allotted work, says "good day," etc, to his keeper, knows his sentence and when his term expires expects to work on a railroad as brakeman as he has done heretofore

He is intemperate in liquor and venery Eyes staring No other physical signs noticeable

Case 3—White male, aged 23, native of the United States Mother died of phthisis No other family history Has been arrested three times for burglary, serving seven years and is now serving a sentence of five years here On admission giving evidence of symptoms of phthisis, he was placed in an appropriate ward He quarreled with two different cell companions, both of whom he accused of attempting to abuse him He was then placed in separate confinement in another block, this displeased him and he refused to eat, he kept his bed and would not get up, one morning he announced himself as a holy ghost, commanded the keeper to open the cell door and laid on his bed with an ecstatic look and immobile This continued for a few days when he was sent to the hospital where he promised never to call himself the holy ghost Cold baths were given him whenever he disobeyed He ate well, slept well, but at intervals pretended to have religious powers In a few weeks he seemed perfectly normal, and said he would never attempt such actions again He was sent back to the ordinary working cells and in a few days broke out again, singing at night time, etc He was then placed in the coal gang outside where he worked well, and now does miscellaneous work around the corridors apparently well He attempted to run away one day but was caught, and explained that he was afraid he would be hurt When questioned about his previous trouble he says he remembers everything, that he was in the habit of abusing himself, that he is nothing but a man, but something in his way of repeating words and a certain absentness at times, together with very much heightened reflexes make me think that he is not simulating He says that he was always nervous, that he got into crime by running away from home when he was 16 years of age and getting into bad company, and that he can blame no one only himself Once he attempted to hypnotize a fellow convict and when asked about it said, "It is a gift from heaven" He has attempted sodomy At first he believed himself drugged, and poisoned and refused medicines

Case 4—White male, aged 66, native of the United States Family history negative At the age of 8 years had a fracture of the skull which left a depression, but no serious consequences seemed to follow He worked at various occupations from the time of leaving school at 16 until he was 26 years of age Upon one occasion while in a saloon a row occurred and he was shot in the throat and shoulder He recovered after a narrow escape Afterwards he was obliged to change his residence on account of difficulty with an officer At the beginning of the recent civil war he began to raise a company but it was not accepted He tried to enlist but the company was full, but finally succeeded in joining a California regiment, and at the battle of Ball's Bluff was injured in the rectum from the effects of which he was discharged Afterwards he re-enlisted and served until the close of the war hile working on a railroad as a special officer he got a drunken quarrel and shot two men for which crime was sentenced to the penitentiary for five years but was doned at the expiration of five months He subsequently l off a scaffold, broke his nose, crippled his hand and discated one patella After twenty-three years marriage his ife gave birth to her first child and she became insane He hen became intemperate, was placed in an inebriate asylum r a short time and after his release had illegitimate relaions with a woman for four months drinking excessively uring all this period The woman was found one day shot, rom the effects of which she died He was convicted of the crime, was sentenced to a term of twelve years in this institution which is now nearly completed After he had been here six years and was working at carpentering he got an idea he was going to be removed and attempted suicide by twice cutting his throat splitting his head open with a hatchet and cutting a gash across his arm These wounds were all healed and he was returned to the carpenter shop, when he again made a suicidal attempt by driving a spike into his temple When this wound was discovered he said he had fallen on a nail About two years ago he says the devil came into his head again and he tried to cut a vein in his arm He was placed in the hospital where he remains He thinks he hears people talk about him, and worse than all, he hears himself talk about those he likes A voice within him seems to utter curses against his best friends Nowhere was he treated so well and yet this voice will talk, but it is only a delusion as no one ever hears him say anything derogatory He eats and sleeps well, is entirely rational in every way, and I am disposed to believe that his injuries were inflicted with the purpose of exciting sympathy and to prevent his being removed He now works around the yard and is obedient to orders

N B —Removed back to his own cell lately, he has never referred to his hallucinations, a thing he did daily while in hospital

Case 5—White male, aged 36 Father and mother intemperate, and brother a thief He was sent to the house of correction for assault and battery, and claims to have been arrested thirty times for this offense He is now serving a sentence of one year here for larceny in breaking the window of a pawn shop, as he says "to steal" When admitted here he was excited and suffering with acute mania, probably alcoholic in origin His cell was covered with his own filth, his clothes torn to shreds Night and day he kept up constant talk in which prayers and curses were jumbled together He had exaggerated ideas, he was God, he could drink thousands of bottles of beer, he had fifty children etc Hypnotics had little effect on him

This condition continued for several weeks when he was placed at the wheel in the wash house and made to turn the crank, but every now and then he would pick up dirt and eat it or tear his clothes Gradually, however, he became quieter and more tidy, and now he is well behaved but his exaggerated ideas continue, and at times his eyes fill with tears and he promises everything, and then will instantly change and threaten vengeance He says his trouble comes from drink and this appetite he attributes to inheritance from his father His entire illness has lasted about one year

Case 6—White male, aged 39 No satisfactory family history Says his father was hung He has been arrested three times for entering houses Has various insane delusions about electricity, believes he is worth millions, does not associate with the other men in the wash house where he is employed, but whenever the opportunity offers walks off and talks to himself He answers questions only after repeated pressing Recognizes his crime and knows his sentence and expresses the hope that it will be his last Was defective on entrance

Case 7—White male, aged 27 Native of the United States Family and previous personal history good Worked well in prison until five months ago, when his overseer noticed a gradual apathy and disinclination to talk or work A new cell companion had been given him, and to him he would not speak He eats very little and will do no work He lies in bed constantly and when asked what is the matter replies "I do not know" There was slight rise of temperature, cold extremities, and replies to questions in monosyllables and generally "don't know" Physical examination negative Urine normal Tongue coated He gave his name, age, and complained of pain, but does not know where Knee reflexes exaggerated, pupils react normal Was sent to hospital and during the same evening talked with other convicts about shoemaking but only when drawn out

The next day he refused food, said it would not go down Temperature normal No obstruction in throat and so informed him, when he swallowed as usual He remains awake at night murmuring to himself Diagnosis Stuporous insanity, or so called primary dementia Ordered cold baths and abundant light food The latter he now ate readily In a few weeks he seemed sufficiently restored to return to work, in fact, asked to do so Within a few days after returning to work he again relapsed to his former condition, sitting in one place constantly and never speaking Was readmitted to the hospital and put on light work in the yard, but would not move unless constantly urged The fear of the bath was sufficient to impel him to many things His appetite is voracious He sleeps well, answers only after repeated questioning, and then only yes or no Has grown fat, reflexes normal, secretions normal When first admitted to hospital he would allow saliva to gather in his mouth and dribble over his clothes Later he would constantly spit on the floor and soil his bed, but he is now cleanly His head is always bent He never looks at any one Occasionally he can be made to smile He promises to do better when the cold baths or wet cups are suggested There has been but little change in his condition for the past two months Is serving first sentence here for assault and battery

Case 8—Colored male, aged 42 Sister epileptic, he is very ignorant, believes prisoners below him are endeavoring to extract a confession from him and to that end torturing him with electricity He feels electric sparks going through him and hears voices saying, "Turn it on stronger", make him tell us" His suffering from imaginary torture will occasionally be so great at night that he screams out No physical ailment can be detected Moral influences have had some beneficial effect and for weeks he will be apparently well He works regularly A partner was given him, but this seemed to have no effect upon his hallucinations He is serving second sentence for larceny

Case 9—White male, age 40 Nativity, England Family history good Has been convicted four times for larceny, serving in all six years Was similarly troubled in his mind while serving a sentence in Canada While here he believed the food poisoned, spirits came in the walls, he concealed weapons with which he threatened the overseers He was disciplined and has since been quiet and pleasant He claims he has no more delusions or hallucinations He believes he did wrong, and it was proper that he should be punished, but he calls God to aid him, and expresses a wish to die here He sleeps and eats well and is abundantly nourished

Case 10—White male, age 30 Nativity, Austria Family history negative At 9 years of age had a serious illness and was unconscious but does not know what the disease was He is a baker by trade and a sailor by occupation Seven years ago he was convicted of rape on a child 9 years old, and sentenced to this institution for a term of ten years, which is now nearly completed About eighteen months ago he announced he was going to die, it had been revealed to him He stripped off his clothes, refused food, etc This lasted a short time and he became all right again The priest says he had noticed evidences of insanity in him on religious subjects He is one of the best prisoners in the institution He does the work assigned him regularly, believes he is atoning for his crime and no doubt would become easily disturbed if the subject of religion were broached He has only shown this one outbreak, and since has acted rationally and has no other delusions or hallucination

Case 11—Black male, age 20 Family history good Early personal history negative Convicted of breaking in a house When he had been here eleven months developed acute mania, becom[illegible]hy, noisy and destructive Was placed in wash hou[illegible] and now, after two years, has had no recurrence o[illegible] His mind seems well balanced and he has no recollection of the symptoms described above

Case 12—White male, age 32 Family history negative Was addicted to intemperance and venery Convicted of attempting to kill his mistress in a fit of jealousy and sentenced to five years here which he is now serving After the lapse of eighteen months from his admission his cell companion was discharged, and being left alone he began to make a noise and rave *all of which he remembers* He continued in this condition for three months when he was placed in the hospital in association with other prisoners when his raving stopped He desired a partner He accounts for this malady by attributing it to masturbation which he claims to have practiced two or three times nightly As soon as he entered the hospital he appeared all right and has continued so up to this time now three years This was evidently a case of simulation An element in the case was the effort of friends to obtain a pardon for him

Case 13—White male, aged 63 Native of the United States Grandmother and aunt committed suicide He is a machinist by trade and had his skull fractured by an accident, was unconscious at the time and his wife would not permit trephining He showed symptoms of insanity six years ago Has worked sometimes at his trade and sometimes at other occupations Had spells of unconsciousness and forgetfulness He invented a patent and stole tools to complete it and for this was arrested, pronounced insane and sent to an asylum He escaped and wandered around the country working at odd jobs and finally came to Philadelphia where he was caught in stealing some tools and sent here for seven years for attempting to resist arrest by an officer On admission was easily moved to tears, could remember nothing, cried constantly, was worried about his wife and children whom he imagined to be starving, gave an assumed name, seems well educated, has a depression in the skull and begs to be operated upon, either to die or get well Letters from his wife and from the asylum corroborate his statements He has no apparent delusions He left the asylum because he thought he was well and wanted to earn a living for his family His case at times resembles one of cerebral softening

After he quieted down and was given something to do to occupy his mind he became more rational, wrote letters, made a model of his lock out of wood, and eats and sleeps well His memory continues impaired His wife says that when he gets to worrying he has spells of violence, a possible epileptoid condition, and he will leave home and wander around He is yet very easily excited so that he trembles and can not write

Case 14—White male, age 31 Native of the United States Illegitimate child No family history obtainable Mother is very voluble and might be called foolish He is addicted to intemperance and venery He was first convicted of larceny in his twelfth year and has since served six terms for similar offenses Four years ago he was convicted of assault and battery on his wife and sentenced to three years Two days after the expiration of that sentence he was arrested for a similar crime and upon conviction sent here under a sentence of three years, making his eighth conviction and sentence He has hallucinations of hearing People speak about him, and they with his wife are constantly persecuting him He has hallucinations of sight also He is easily excited and angered Eyes staring

Case 15—White male, age 53 Engineer by trade Phthisis on mother's side Had syphilis twenty six years ago, was formerly intemperate in habits He met with an accident during the war in which his skull was fractured This was followed by one month of delirium and one year of dementia Since then there has been no noticeable symptoms except that delirium easily occurs when drunk In a quarrel he struck a friend with his fist and killed him Pupils are pin hole in size, knee jerks greatly exaggerated No other physical symptoms No evidence of any psychical disturbance

Case 16—White male, age 34 Loom fixer by trade Father insane One sister committed suicide while insane He has had "general nervous trouble" for the past four years, with illusions at times Is intemperate in liquor and venery He struck his aged mother a severe blow for ordering him out of the room He has a small head, seems agitated, is very irritable when under the influence of liquor No evidence of any delusions or hallucinations now

Case 17—White male, age 34 Carpenter by trade Father addicted to drink and had a stroke of paralysis, which took him to the almshouse He was convicted of patricide and sentenced to ten years He has tremor of hand knee jerks greatly exaggerated Has been nervous for years When angered he will instantly use any weapon at hand Is bothered greatly by insomnia There is no evidence of delusions or hallucinations

Cases 15, 16 and 17 represent a group that is very interesting and which might be classified as neurotics, not criminal neuropathy as Wood defines a class, but *simple* neuropathy They are persons whose family history shows crime, or insanity, or intemperance, who have always been fidgetty, probably, as children, "bad tempered" when opposed, who *have indulged in liquor to excess*, who have not been dominated by any distinct delusions or hallucinations or impulses, but when opposed in a quarrel they can not control themselves, and the first best thing they can grasp is hurled madly at the object of their sudden passion A moment afterwards they are sorry and curse themselves for their uncontrollable temper

Often we meet children with such ungovernable passions they are feared by their parents and hated by their friends No doubt such moments of anger could be traced in the childhood of many ' homicides of occasion "

The outburst of ill temper found in the early stages of general paralysis is readily diagnosed from that of the neuropathics, because in the former it is unusual and a change from another condition In the latter, however, they have been nervous from childhood

When paralytics commit crimes that are punishable they present so many other phases of their disease that lawyers soon discover it, and they are switched off to the proper asylum

We find among fifty cases showing mental trouble fourteen were indicted for homicide, or 28 per cent, while in the entire penitentiary population only 9 per cent are murder cases (The census statistics of 1890, of all the prisons in the United States gathered by Wines, gives 8 9 per cent of homicides to the total prison population) Eight of our fifty cases were convicted of assault with intent to kill, and seven for rape, making a total of twenty-nine or 38 per cent committed for crimes against persons Of the entire prison population only 30 per cent are sent for crimes against persons while 70 per cent are for crimes against property Thus our statistics support the opinion that insanity leads more often to crimes against persons than against property Very seldom does the crime seem to be the direct outcome of insane delusions

In 40 per cent of our insanities, ideas of persecution, "Verfolgungs Wahn" is clearly developed

The prisoner known as peculiar by his cell companion, tells his overseer some morning that he "should not put any more of that stuff in his food," he sends for the doctor and claims he is being poisoned, he commences to write letters to various persons, the warden, inspectors, etc Again he complains about persons occupying neighboring cells speaking of him, they call him obscene names and accuse him of indecent crimes He abandons work and sits all day in the corner of his cell, speaking only when repeatedly addressed His bowels are or soon become constipated, but otherwise the prisoner appears well His cell and person are kept clean Sometimes he refuses his food for a few days, but is easily persuaded to eat

In some cases religious ideas are intermingled He may believe himself possessed of the holy spirit, God has commanded him not to eat Hallucinations sometimes combine themselves with delusions about his sentence He imagines his time has expired and he is restrained from going out Letters are withheld from him, and a pardon awaits him in the office

Sleep is variable Some rest soundly, while others are kept awake all night by their delusions According to their own explanations, "electrical appliances keep them awake" or "persons come through the windows and awaken them," etc

The hallucinations may each be only of short duration recurring at varying intervals They may be constantly present, but interfering so little with the daily vocation that the prisoner eats, sleeps and performs all tasks without interruption, and his defect is only disclosed by questioning

The hallucinations may disappear entirely and not return during the balance of his term, and only reappear in some form when he returns to serve another term as a re-convict

And just here occurs the difficulty of at once recognizing simulation If one who presents such manifestations of mental disturbance is placed on extra diet, excused from work and receives other privileges given the sick, if he is maligning he will attempt the same deceit whenever he enters a prison And even men who were not simulating the first time may attempt the deceit subsequently on account of the privileges

There are very few forms of insanity in which punishment and reward are not understood

There is at present in this penitentiary a man who is serving a life sentence for murder, committed as a sequence of his insanity, who was always considered "cranky" by the people who knew him He is noisy, filthy and incoherent, yet were I to place him in a hospital cell with others he would be quiet and neat Only at times will he become very talkative This has been tried several times with him with the same result He is not left permanently in the hospital for fear of injury to others

I am acquainted with no possible test to detect all simulation When prisoners will feign to obtain slight favors while in confinement, how much greater is the incentive when on trial for life or liberty

Case 18—White male, age 43 Native of Ireland Family history negative Deprived of father at early age Came to this country with his mother and located in New York city Began to run streets and at 9 years of age was placed in house of refuge At the end of a year in that institution he was bound out on a farm ran away and returned to New York city, where he became a newsboy When 12 years of age he followed a company of soldiers destined for New Orleans and left them at Cairo and began operations as a hotel thief, stealing clothes, etc, and thus working his way back to New York, where he became the associate of a bad crowd At 14 years of age he was sentenced to a year in the New Jersey penitentiary, and three months after the expiration of this term he was returned under a four years' sentence for burglary The night following his release from this term he robbed a guest at a hotel, enlisted in the navy, went by sea to California and there deserted and worked his way East He enlisted in the regular army, fought all through the Modoc war, deserted, went to San Francisco and resumed his occupation of hotel thief He was finally caught and sentenced to four years in the California State Prison While there was witness to the murder of a prisoner by his room mate This brought delusions and he began to imagine people were trying to kill him After his discharge these delusions vanished He resumed his old occupation and worked his way back to New York at the expense of the hotels en route Here he was convicted of another crime and sentenced to Sing Sing for four years In prison his delusions returned and were treated without avail Upon his discharge they again disappeared, and he resumed occupations working the hotels until he reached Chicago, where he was sentenced to four years in the Joliet Penitentiary The delusions returned and continued throughout his confinement Upon his release he worked his way to Philadelphia, and, caught in the act of stealing at the Lafayette Hotel, shot the watchman, and received a sentence of ten years here, which he is now serving He is a quiet man, well behaved here, eats and sleeps well, and rational in all his conversation He does not claim to have been impelled by some uncontrollable force to steal, but did so because that life pleased him

There is another prisoner here who escaped from the Auburn Insane Asylum for convicts, who was sentenced here for breaking into a jewelry store While in the county prison he manifested signs of mania, but here he was rational until one day he had some trouble with his knitting machine, and in his passion wrecked it When reprimanded he said he would do such a thing whenever it bothered him, and threatened any one who attempted to prevent him, that was the way he did in other prisons and that was the way he proposed to do here, he was no one's slave He was disciplined and made to understand that such conduct was not permitted here, and since, there is not a more civil or industrious convict than he in our population There is no evidence of insanity He has spent most of his life in various prisons for burglary Like the previous man noted he follows this occupation as a matter of choice

But, in reality, simulation is rare here More frequently does true insanity go undetected throughout the trial and is only discovered by the prison physician or keeper

That the crimes of the insane bear no relation to their insanity is a well known fact easily established

A man who has hallucinations or delusions of persecution might logically be supposed to commit an assault on the person he imagined as offending, but in fact they are often common thieves and are repeatedly convicted of burglary or larceny As a companion of one such aptly remarked, "he hasn't sand enough to kill a fly"

The crimes against persons are often committed in a drunken quarrel—a man is killed without the slightest premeditation, a rape accomplished or attempted under the influence of liquor, etc

Probably the crimes resulting from insane delusions or hallucinations take their perpetrators to insane asylums, but the record of such crimes is not large

In this connection I am impelled to refer to the usual practice of the courts in the treatment of offenders whether sane or insane—the moral responsibility—"does the man know the right or wrongness of his act," is the usual test

When a person commits an act contrary to the laws of the country a jury is empaneled to decide as to his guilt and all the facts in the case, and when the question is raised, these are made to include the sanity or insanity of the defendant, and what a judge, jury and lawyers take weeks often to decide, an ignorant fellow is asked to do offhand

This question of absolute right or wrong is both a broad and intricate one It involves each man's idea of what is right or wrong and that depends almost wholly upon his education and surrounding influences If this be true is not the man of few social advantages less responsible than those with many? May not an act be right for one individual and wrong for another? Or at least wrong for one and not culpably wrong for the other? And so the worst criminals be less responsible?

How many years is it since we have ceased to punish people for their beliefs?

The common opinion (at least as it finds expression in print) is that justice is not administered in a spirit of vengeance The aim is only to deter, protect and reform If this be the real motive why inquire about the moral responsibility? Is not protection needed as much from the criminal acts of the insane or mentally defective as from the mentally strong?

Beccaria says crimes are only to be measured by the injury done to society, and our modern penologists are approaching the same conclusion Paul Dubuissin (*Archives de l' Anthropologie Criminelle*, Vol vii, No 38), says "When we will only consult the social utility in our treatment of criminals then the great question between crime and responsibility will cease Then will arise in each case not, Is he responsible, but is he dangerous to society? Not, Does he know the difference between good and evil, but is he of more evil than good to society?

It matters not, then, whether we believe with Lombroso that all professional criminals are diseased and therefore irresponsible, or whether the criminal be morally insane, a born criminal, an habitual criminal, an idiot or defective of any class If he is unsocial, society should be as much protected from his acts as she seeks to be against cholera, leprosy or any other corrupting or dangerous or unsafe influence And the more dangerous the more protection

Is the criminal an insane person, or do we find insanity more prevalent among criminals than among honest folks?

The answer to this question depends upon our interpretation of crime and honesty

As we have no real measure for right we can not with entire accuracy say one man is honest and another dishonest Every man on one side of the iron bars is not a criminal, and every man on the other side an honest man Diogenes would have just as much need for his lantern to-day as in the time of Alexander the Great

It is *conviction* that makes a man a criminal in public esteem, not *detection* How many are there among us who have not some time in their lives committed an act that was punishable under the law? and had it been enforced would have sent us to the reformatory or prison, and thus by a simple application of the law, without reference to its violation branding us throughout our future lives as criminals I stole an apple when I was a youngster Many a boy has received a year's sentence for less and obtained his degree in a house of refuge Because I was not caught I am supposed to be honest The other lad is a *criminal*

The smartness of the lawyer keeps many a guilty defendant out of prison The theory is that every man is equal before the law Practically we know this to be a fiction When the machine is in good working order with a batch of poor and friendless victims on hand, they are "railroaded" to prison with so little an attempt at legal defense as to amount to a farce

In view of the self-evident unevenness and partiality in the administration of law, it is impossible to draw the line between the criminal and the non criminal classes so as to compare the diseases peculiar to each

A CASE OF SO CALLED MORAL INSANITY

Case 19—White male, age 23 Nativity, United States One sister reported as having chorea and another puerperal insanity

When eight years old was sent to the house of refuge for running away from home After a residence there for thirteen months he was returned to his home At the expiration of another year he was arrested for larceny and being declared insane was sent to an aslyum and from there to an institution for defective children, and from the latter finally ran away He stole from his parents and was generally so incorrigible that he was placed in the Norristown Asylum as morally insane At the expiration of two years he was discharged and at once returned to his old habits In 1886 was again arrested for stealing from his parents and readmitted to an insane asylum from which he was discharged at the end of a year by direction of the Board of Lunacy In 1890 he was convicted of larceny and sent to the Huntingdon Reformatory, from which institution he was transferred here for incorrigibility He says he is addicted to intemperance, opium, onanism and venery and seems proud of his record His mother can do nothing with him and in the neighborhood of his home he is a common nuisance The first day here he tried to obtain opium through complaining of cramps as he claims to have succeeded in doing in other institutions He failed here, however, and has had no returns of cramps He maligned epileptic fits These were promptly cured by the cold water douche He went through the entire list of troubles to obtain special privileges or escape work, with the regularity of a professional Failing in every attempt and through the assistance of persistent but harmless discipline he has finally been brought into fair submission He has been exhibited as a living example of moral insanity When asked questions before a class of students he would purposely give false and outrageous answers to keep up his reputation His crime history has been obtained and thoroughly established by relatives and acquaintances He is short and fleshy, head brachycephalic, eyes small, teeth irregular, boyish feminine appearance He is very cowardly and fawning—never abusive or angry

Is this lad insane? Is it moral blindness? Was his home training defective? These are questions which no one can satisfactorily answer, and yet society needs to be protected from such a class

He belongs to a class that is rapidly increasing and especially in the large centers of population They are the "incorrigibles" of reformatories and as such are transferred to prisons and inducted into a career of professional criminality which they follow until death The reformatory can not or does not reclaim them, the prison has no terror for them If their energies and genius could be diverted into some useful occupation they might become beneficial members of society

The question whether criminality is due to mental defect, remains unsolved

Mandsley says "The criminal class constitutes a degenerate or morbid variety of mankind marked by peculiar low physical and mental characteristics "

By an artificial selection such as is practiced in our police courts, the man who can afford to obtain able attorneys, or pay fines, or by his talents avoids detection, or by many of the other fortunate or practical known avenues escapes conviction Then as a rule only the poorest, most ignorant and lowest classes are sent to prison, the exceptions being the rare occasion of a great popular clamor where some victim must be taken from the higher class, but these are limited to the very smallest number demanded to satisfy the outcry A prison population so collected must of necessity be degenerate from every point of view

Does insanity appear more frequently in prisons than in communities outside? Authorities in former times have all answered in the affirmative Can this answer be accepted as entirely true? Were these convicts insane before they reached the prison? Did their insanity lead them into crime?

Is it insanity or is it simulation? Semal finds insanity much more prevalent among those outside than those inside prisons. Sir Matthew Hale is quoted as saying "Habitual felons suffer from a degree of partial insanity." This means nothing, as there is no complete insanity. Dr Macdonald of Auburn, in his twenty-third annual report "believes crime to influence the insanities and to constitute them as a distinct class." He remarks on the general absence of expressed delusions, generally coherent in conversations, perform their allotted tasks, display wonderful combinations of shrewdness and cunning in their efforts to escape.

If we compare the lower orders of men in the community at large with those in prison, the proportion of insane in each would not differ much.

The trouble with all our statistics on the subject is that they are one-sided. We must divide society into classes, according to wealth, ability and position, as Chas. Booth has done in his "Life and Labor of the People."

Class "A" in prison must be compared with class "A" outside before any reasonable conclusions are warranted.

We know that insanity does sometimes cause persons to commit crime, but there are many insane who do not commit crime, and there are many criminals who are not insane.

Masoin, at the Anthropological Congress held in Belgium, gave the following differences between the criminal and the insane act: the diseased kill for the sake of the deed—rob for the sake of robbing, without any other aim. The criminal acts out of covetousness or hatred. After the act he seeks to conceal himself; the alien does not.

The crime calms the insane. It troubles the criminal.

When we will recognize that "every society deserves the criminals it has" and we will endeavor to correct the evils that in a large part cause crime, and treat our malefactors not with a spirit of vengeance, not with a visitation of justice, not as sinners but simply as obstructionists, whom society must place under restraint or remove to a place where they can be of service instead of hindrance, then only will the penal question reach a solution.

Has a man stolen my pocket book two years in prison will not return it to me; time can not measure the injury done me or the suffering caused the prisoner. To one man, *ten* days will cause as much anguish as ten years to another.

See how childish our present mode of justice; a man commits 100 burglaries and is caught, he is only charged with two; is sentenced to five years imprisonment. His term is served; he is caught stealing a watch and receives two years. He again returns to burglary, and after awhile is caught and is given another sentence of a few years, and so ad infinitum, ten, eleven sentences, each time a trial, each time efforts to detect him, and the numerous times he wholly escapes detection. What would be thought of the suggestion that a chronic maniac be sent to an insane asylum for one year and then released unconditionally; then after he had killed some one, again returned for a definite term of one or more years?

The danger to society alone should be considered and the professional criminal placed in "durance vile" until *cured*, if that result is possible, or permanently if the danger to society is ineradicable, and this wholly as a protection to society and irrespective of his sanity or insanity, his moral responsibility or irresponsibility, his reformation or punishment.

Chairman.—I think Dr Ball is to be congratulated on doing what has been done too little in this country, namely, working in the prisons for facts in reference to mental diseases, instead of having issued from the officials of prisons and others in authority general statements about matters of this kind. This, I think, is a sort of work which will do for criminology what men have done for other forms of mental disease outside of prisons.

Dr F. P. Norbury of Jacksonville, Ill.—I have met with quite a number of these cases in the Illinois Hospital for the Insane. It is a rule in the Illinois institution, or was until the inauguration of the criminal hospital for the insane, that all criminals found to be insane should be sent to the State Hospital. As a result, we got all cases belonging to the county or district in which the hospital was. I found that quite a number of these cases were not chargeable with criminal responsibility, and it is just from that standpoint that I would like to speak—cases of paranoia in which the delusions were not thoroughly settled, but probably did exist prior to the commitment of the crime, which after conviction and sentence to the hospital or to the penitentiary developed. I have in mind two cases, one convicted of horse stealing and sentenced to five years, another case convicted of larceny. Another case I might mention is a case of homicide, life sentence; one of these cases was a marked case of paranoia and is now in the Central Hospital for the Insane. The patient's delusions are thoroughly systematized and all of a religious nature, he believing that he is Elijah, and his inspirations come through the rocks, etc., and daily he is engaged in his preparation of prophesies. The other case is a case of general paralysis and the patient died after having gone through the regular course. His insanity was not recognized as general paralysis or in fact as insanity for over a year after his sentence, when his maniacal attacks increased and he became a subject of considerable anxiety to the prison officials. The other case is a paranoiac under life sentence, and he is one of those individuals who is being poisoned by the guards and is having noxious gases thrown into his room by unseen forces, and who also has telephonic communication with the devil and his hordes daily. As a result, you can imagine that he can make life miserable for all about him, which he has done since he came to the institution. It was on this account that he was placed in the Hospital for the Insane. It is evident that the attention given to mental diseases in the prisons of our State has been sadly neglected, and it is to be remarked also, that in the paper that accompanied those cases from the prison officials, every form of mental disease is set down as dementia, duration unknown, no symptoms given, and no history at all, and all that we can get is probably from the guard who accompanies them. The appointment of the prison physician is largely political; his attention to details in regard to mental disease is very slight, and all the history we can get is from the guard and from the patient himself.

Dr J. G. Kiernan of Chicago—We have had too little on this subject, especially from American alienists outside of Dr Ball. I remember some communications of Dr Carlos Macdonald of New York based on his results in the Auburn Lunatic Asylum and in part in the penitentiary. In a general way he found the same features of insanity among the inmates, such as delusions, ideas about being poisoned, etc., as has been mentioned, but it seems to me that a number of the cases that the doctor has reported might belong to a good many other categories, for instance, one case which is classified as stuporous insanity might possibly be epilepsy There were no convulsive attacks to be sure, but their occurrence is not necessary in epileptics, there being perhaps but one in a long period and recurrent stupor taking their place With regard to the frequency of insanity in prisons I would state that on one occasion I went through the reports of the Joliet Penitentiary, and discovered that the proportion sent from Joliet to the various asylums was twelve times the ordinary proportion in the State according to State statistics A number of those cases came under my observation at the Cook County institution They had gone to the State institution, their term had expired and they had been transferred to the hospital There was one case in particular which illustrates the point that is often ignored, that underneath a primary hallucination may run a secondary delusion which may impel a man to crime This man had a delusion about witchcraft, he was a negro and a paranoiac and his delusions were based on certain experiments in mesmerism which he had seen performed in his boyhood, and it is a fact that he stole in order to get placed in the penitentiary to escape mesmeric persecution

Another fact, in which I was very much interested, was that the penitentiary officials had reverted to the old procedure of Louré As the majority remember, he used to treat the insane as follows argue with them to show them their peculiar absurdity and delusion and hallucination, and then proceed to douche them, and he undoubtedly checked the exhibition of the delusions of a large number of his patients In a few cases the inhibitions were sufficiently strong to control the patient, but the great majority of his cases when followed up were found to be rendered even more persistent and dangerous than before Another point raised by the doctor which I think does not quite deserve the credit given it, is the attempted differentiation between the insane and criminal The insane do things with the same motive as the criminal You will find insane people stealing from each other, and recognizing that the insane man knows what he is about in that thing You will find that in patients in the wards they will make that distinction themselves between stealing that is delusionary and that which is not Furthermore, it is stated that the insane have not accomplices Here very often you have a central figure, a paranoiac, a principal, and he has a number of accomplices, some of whom may be sane and some insane of a weaker type Take for instance the celebrated religious homicide that occurred in Massachusetts The son of Freeman was ill-balanced and so was his wife, but around them were a number of sane Second Adventists, and some affected with mild paranoia

With regard to the test of insanity in Illinois, we have no test, strictly speaking, other than the essential test of the common law based on each case For instance, if you raise the question of insanity in Illinois, the State must overcome the presumption of insanity and must prove the prisoner insane beyond a reasonable doubt Furthermore, even a prosecuting attorney would not attempt to raise the right or wrong test, pure and simple, the insanity must have overridden the reason and judgment, that is the test in Illinois Of course, as Dr Norbury has stated, the people in charge of the penitentiaries are decidedly careless in their examination, study, history and treatment of these cases One of the physicians in the penitentiary on the witness stand recently did not know the name of the inferior maxillary bone He was a graduate of Harvard, had turned Hahnemannic and was in charge of the Joliet Penitentiary in the interest of a certain clique He is now at the head of a homeopathic asylum in California

Paretic dementia was spoken of I remember in New York three cases came into Ward's Island Hospital, they had been a year in the penitentiary and repeatedly punished for dirty habits, and one of them an old laborer, had stolen socks and shirts in plain view of everybody in a store The boldness made it plainly insanity We found his back criss crossed with flogging In the interests of society I think it is best to adopt the view of considering the criminal of the habitual type as a chronic lunatic and to shut him up for life I remember the case of an ex-policeman who lost a portion of the bone in his head from an accident The traumatism resulted in delusion with occasional periods of excitement His wife gave him quinine on one occasion and got him quieted when the police broke into his room, but the insane man knocked the policeman down with a hatchet, grabbed the policeman's clothes, put his wife's hat on his head and paraded the street with a club He was arrested, taken to the station house, tried, and the jury gave him three years, and the very intelligent judge took off one year on account of the injury to his head The man went to the penitentiary three months and then went to the insane hospital The absurdity of sending such a person to the penitentiary is evident The whole system needs remodeling, but it can be done without any change in the common law which must furnish the basis of all change

Dr Ball—I would like to see the chronic criminal shut up for life, but I do not think it would be well to regard him as a lunatic in order to accomplish that, unless you can prove his insanity As far as epileptics are concerned, I would say that I have as yet very few who have shown any signs of their epilepsy in prison They might have been epileptics, but because of the quiet life they led in prison they never had any convulsions there It is usually the fact that epilepsy has a great deal to do with crime

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HEMIPARAPLEGIA, WITH REPORT OF A CASE COMPLETELY RECOVERED AFTER ONE YEAR'S DURATION

Read before the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY L HARRISON METTLER, A M, M D
CHICAGO

In certain lesions of the spinal cord, the prospects of recovery are so much more hopeful from surgical interference than from medical treatment, that an exact diagnosis is of paramount importance Hence every ray of light, however feeble it may be, that illuminates the question of spinal cord localization, should be most carefully cherished Our knowledge of the motor centers of the cord is already sufficiently exact to guide the surgeon in his operations, but the precise limitations of the sensory areas are matters still of much uncertainty A great deal has been accomplished towards increasing our information in this respect by Oppenheim, Westphal, Rosenthal, Eulenberg, Ross, Mills, Osler, Church, and especially Thorburn According to the general concensus of opinion to-day, the decussations of the sensory and motor tracts are such that a lateral focal lesion anywhere below the cervical enlargement gives rise to a *hemiparaplegia*, with paralysis upon one side of the body and anæsthesia upon the other Every instance of an anomalous presentation of this classical picture must be possessed of unique interest, hence I beg to present the following case, which has seemed to me to be worthy of special study

Case —M D , a bright, cultured girl 20 years of age and residing in the western part of Pennsylvania, was brought to me Oct 5, 1890, by Dr C J Steim The following history was narrated to me by the patient herself in the presence of the doctor and her elder sister On the morning of Dec 25, 1889, while walking along the street, she accidentally stepped upon a loose coal-hole cover and fell in such a manner that the left leg passed down into the coal chute while the right was extended out over the pavement She fell completely out with her whole weight Unconsciousness at once resulted, and on account of the free use of narcotics by her medical attendants, she was not fully cognizant of her surroundings until a week after the accident In the meanwhile the hip joint was found to have been dislocated and was immediately reduced There was a considerable hemorrhage from the vagina, and in some way indistinctly described, she was torn Shortly after the accident the left limb began to swell, became extremely painful and was completely paralyzed Poultices and hot applications were employed The fever continued high and with it there was excruciating pain at the back of the head A week later the swelling of the limb entirely disappeared Six weeks after the accident, the faradic current was employed locally to the paralyzed muscles without any improvement In March, three months after the accident, the swelling of the limb reappeared At this time there was no local sweating, no glossing of the skin, no formation of blisters or sores This was the last time that the leg swelled During the course of the year, the right arm enlarged somewhat and became cold and cyanosed This occurred some five or six times At no time were there any symptoms of a similar character in the left arm or right leg There were no cincture pains no eye disturbances, no dysphagia, no dyspepsia, no dyspnœa The bowels remained unaffected, with the exception of a few small bleeding piles which appeared immediately after and seemed to be one of the direct results of the fall The rectal sphincter was very slightly if at all affected The sphincter of the bladder was much weakened Severe metrorrhagia occurred some five or six times, and during the entire year there was a profuse leucorrhea which for a time contained considerable pus Prior to the accident menstruation had always been painful and scanty, but now had become very much more so Micturition also produced severe pain The urine was never voided in normal quantity, but frequently contained a small amount of blood and sediment At times violent pains shot along the spinal column, especially in the lumbar and lower dorsal regions, while a continuous intense pain was felt in the occipital region of the head This latter pain was almost constantly present, but on alternate days became so exceedingly unbearable that the patient was obliged to take to her bed and make free use of anodynes and narcotics

Three weeks before the patient was brought to me, a brilliant stroke of lightning flashed close beside the room wherein she was seated She experienced a most peculiar sensation or "kind of rush" up the spine into the head She fell, became unconscious for a time and continued to be delirious for several days after For a long while she said she could feel a kind of repetition of the shock about every third or fourth day Usually the sensation died out in ten or twelve hours When I saw her she was still subject to intense constricting headaches These seemed to strike from the back of the head forward to the temples, were always worse in wet weather, and as a rule lasted about twelve hours Sometimes the face became puffed and pale, while the eyes would be directed inwards Two weeks after the accident the patient first noticed for herself that her left leg was completely paralyzed and anæsthetic No improvement had occurred in this respect during the course of the year So much for the history of the case

Upon examination I found the eyesight and hearing both good The grasp of the hands was normal and the same in both In the right leg the patella reflex, ankle clonus, muscular movements and sensation were all normal In the left leg they were all completely abolished The line of beginning anæsthesia corresponded quite sharply with that of Poupart's ligament in front, the crest of the left ilium and a line drawn transversely across the left half of the back on a level with the crest of the ilium or fourth lumbar spine Above this line there was considerable hyperæsthesia The limb was well developed, warm to the touch in its upper part, and exhibited the natural color of health Both the cutaneous and muscular sense were entirely wanting The deep insertion of a needle into the tissues, the strongest electric currents as well as simple contact with the skin, were absolutely unperceived So thoroughly did I test for sensation that the possibility of simulation was completely eliminated A similar examination of the opposite leg and of the two arms revealed nothing abnormal in regard to motion or sensation Severe pressure along the course of the left crural and sciatic nerves gave no indication of pain There was no atrophy, as actual measurement showed both limbs to be of the same size With the use of faradaism, a mild primary current produced slow but decided muscular contractions, while the secondary current gave rise to more marked muscular movements The galvanic current produced the usual normal responses I could detect no indication of the reaction of degeneration The electrical examination was not, however, as complete as I would like to have made it, as the patient was suffering from considerable pain in the spine and I did not care to distress her further The distal circulation was slow, and as a result the leg and foot were cold and cyanotic The whole spinal column was so exceedingly sensitive to the touch that its examination was not so satisfactory as could have been desired In the region of the lower lumbar vertebræ it was unusually tender, so that the patient winced and screamed with the pain each time I gently pressed the lumbar spines Between the third and fourth lumbar vertebræ I could distinguish on the left side a small, hard nodule about the size of a pea which was especially painful The distress and general nervous excitement of the patient prevented my determination at that time of the nature of this swelling In the vicinity of the sacrum and coccyx the pain upon pressure was quite unbearable

As a result of this somewhat incomplete examination, I diagnosticated the case as one of incipient meningo-myelitis, with the meningitis as the more pronounced feature at the maximum intensity of the disease focalized on the left side of the lumbar cord I imagined that at the time of the accident there had been a hemorrhage within the spinal column, either in the lumbar region or elsewhere, and that some of the blood had gravitated and formed an irritative clot which in conjunction with the attending inflammatory process was compressing and constricting certain nerve roots from the left side of the cord. With this conception of the case, I recommended a vigorous daily counter irritation of the entire spine, the administration of mercury (blue mass guarded by opium) to the point of ptyalism, the use of the mild faradaic current to the paralyzed muscles, and the employment of cod liver oil by local inunction The treatment was commenced Oct 5, 1890. About a month later, Nov 7, or nearly eleven months after the accident and onset of the paralysis, the patient arose from her chair and walked with as much ease apparently as she would have done in perfect health She stated that a few days prior to my last visit she suddenly felt a kind of tingling and burning sensation, as though the leg had been "asleep," and were recovering, and that this was immediately followed by a complete restoration of its movement and sensation Hyperæsthesia, I found, had replaced the anæsthesia and though it tired the patient quickly to use the limb its power of motion seemed to have been completely regained The tingling sensation was noticed at the same time with a similar sensation up and down the entire length of the spinal cord I found the tenderness of the vertebræ almost entirely gone so that the patient could stand quite vigorous blows upon the back, except in the lumbar region where it was still somewhat sensitive From this time on she ate and slept better and the bleeding of the hemorrhoids ceased On Nov 4, Dr Steim wrote me as follows "Patient is steadily improving and is quite as strong as ever she was" On April 28, 1892, I received this note from the Doctor "I am glad to inform you that Mrs S (she had become married by this time) has never had a single symptom of the old trouble since you saw her In fact her health generally since then has been almost perfect" Again during the summer of last year the Doctor wrote me "The recovery has been perfect and the patient has been as strong, if not indeed stronger than ever before in her life, with the exception of typhoid pneumonia over a year ago"

The unilateral distribution of the anæsthesia and paralysis in this case indicates, of course, a unilateral lesion The presence of the motor and sensory paralysis upon the same side would suggest a lesion outside of the cord proper The absence of any girdle pain of pronounced alteration of the sphincter functions, and of atrophy of the muscles establishes the non-involvement of the gray matter of the card The upper border of the anæsthetic area limits the upper border of the lesion to the level of the first lumbar segment The tenderness of the spine, the fever and other constitutional symptoms resulted of course from the meningitis, which was probably a mere extension of the inflammatory process from the lumbar region upwards The traumatic origin of the paralysis is extremely indicative of a fecal hemorrhage and the presence of an irritative clot would be an all-sufficient reason for the inflammation of the membranes The hemorrhage was probably subarachnoid The transitory symptoms which arose during the course of the year in conjunction with the upper regions of the cord may have been due to a number of smaller hemorrhages of which the blood may have gravitated and so produced a large, irritative clot along the line of the lumbar segments and in the meshes of the cauda equina The chief difficulty in this explanation, however, is the completeness of the anæsthesia from the very beginning of the paralysis, for such a sudden and complete anæsthesia usually follows a lesion in the substance of the cord itself or complete severance of the nerve roots When nerve roots are compressed by hemorrhagic clots or meningeal adhesions it is more customary for the anæsthesia and paralysis to be preceded by pain, hyperæsthesia, paræsthesia and spasm Furthermore, with anæsthesia dependent upon destruction of the posterior nerve roots, there is generally very decided atrophy of the corresponding muscles, especially if the lesion involve the root ganglion or that part of the root external to the ganglion

It must be admitted that there are certain features about this case strongly suggestive of hysterical hemiparaplegia They are for instance the sex and age of the patient, the location of the paralysis (hysterical paralysis being most frequent in the left leg) the absence of any considerable atrophy, the apparent preservation of the rectal with but slight involvement of the genito-urinary functions, the association of the paralysis and anæsthesia in the same area and the peculiar distribution of the anæsthesia which corresponded so closely with Charcot's well-known limitations of anæsthesia in hysterical paraplegia Against the hysterical hypothesis, however, I place the traumatic origin of the motor and sensory paralysis, the absence of all other hysterical symptoms during this or any previous period of the patient's life, the prolonged duration of the paralysis and anæsthesia without the slightest modification, the absence of the hysterical temperament, the completeness of the anæsthesia and the perfect insensibility of the nerves to the strongest electric currents, the hyperæsthetic zone just above the level of the anæsthetic area and the complete restoration without the slightest subsequent reappearance of any of the old symptoms Furthermore, the upper limit of the anæsthesia posteriorly corresponded with a horizontal line drawn across the back on a level with the fourth lumbar vertebra, and not with the line of hysterical paraplegia which Charcot says, "follows the insertion of the muscle of the buttocks exclusive of a V-shaped area over the sacrum"

In the *American Journal of the Medical Sciences* for July, 1892 Starr reports a case (No 5) possessing many points of similarity with our own Briefly stated, the patient was a woman, 28 years of age, who was well until May, 1889, when after a day of fatigue she was suddenly seized with severe pain in the sacral region and in the back of both thighs, with retention of urine and feces and with a sensation of numbness over the lower sacral region, perineum and vagina The urine and feces were moved with much difficulty The sphincter ani contracted on the finger The knee-jerks were exaggerated The plantar and gluteal reflexes were normal, and there was no tendency to bedsores, no tenderness of the back, no girdle sensation nor anæsthesia of the legs When examined again in Feb 1890, there was beginning muscular weakness in the left leg and a diminished response to faradaism, without atrophy There was still some pain in the back and in the left leg constantly but more especially in the left ilio-inguinal region There was still no girdle sensation, spinal tenderness or bedsore The area of total anæsthesia had increased There was slight impairment of the tactile sensation on the outer side of the leg below the knee and on the back of the thigh from the anæsthetic area downwards The case was not so far advanced as ours, but in the association of its symptoms closely resembled it The diagnosis of Starr was that of a hemorrhage into the conus medullaris and lower sacral segments of the cord He suggested that this hemorrhage had lighted up a chronic meningo-myelitis and as this advanced slowly upwards, it had increased the symptoms

Starr and Lloyd's case (No 11) in the same paper, was one of compression of the cauda equina producing a localized paralysis and limited anæsthesia in the right leg There was a fracture of the lumbar vertebræ, followed immediately by a paralysis and indefinite area of anæsthesia in the right leg A year later there was marked deformity at the third lumbar vertebra, paralysis with atrophy, reaction of degeneration of most of the muscles of the right leg, anæsthesia down the back and outer side of the same limb In view of the diagnosis of compression of the cauda equina at the third lumbar level, Dr Lloyd operated and removed the second and third lumbar spines and laminæ with ultimate recovery of the patient. The point of significance in this case is the association of the anæsthesia and paralysis, which is explained here by the limitation of the lesion to the cauda since the spinal cord proper terminates at the first lumbar vertebra. The absence of the sphincter symptoms would exclude involvement of the corresponding nerve centers, which Starr finds from two of his cases to be located in the "lower two segments of the cord," a fact which has been confirmed by autopsies in the cases of Kirchkoff, Westphal, Oppenheim and Herter, and in the cases of Rosenthal, Bernhardt, Eulenberg, Mills and Huber. It is always difficult, except in fracture cases, to differentiate lesions of the cauda from those of the cord, and Starr takes the position that it is "questionable whether, except in cases of fracture below the first lumbar vertebra with displacement of the vertebræ any sharp line of distinction between cord and cauda lesions should be attempted." It is to be hoped, however, that some day our knowledge may permit us to make such a differentiation.

In connection with the case I have reported, the question arises as to the possibility of there being a unilateral paralysis and anæsthesia in the same limb, as a result of a single unilateral lesion of the cord. In other words, Is there such a thing as a true hemiparaplegia produced by a focal lesion in which the paralysis and anæsthesia are not crossed? The textbooks almost universally answer this question in the negative. Ranney[1] says "The muscles below the seat of the lesion are paralyzed on the side of the body corresponding to the exciting cause and the skin is sometimes rendered hyperæsthetic, while the integument of the side opposite the lesion is deprived of sensibility." In his "Lectures on the Nervous System," he furthermore most emphatically states that "should symptoms of anæsthesia appear upon the side where the motor paralysis is present, you may regard it as conclusive evidence that the exciting lesion is progressing and the opposite lateral half of the cord is being involved to a greater or less extent." Seguin[2] writes that "hemiparaplegia is a rare variety in which one lower extremity is paralyzed while the other is anæsthetic."

Mills[3] says that "motor paralysis occurs in the leg of the same side and anæsthesia in the trunk and leg of the opposite side." So authority after authority might be quoted, all stating the same truth. They insist upon the crossed nature of the symptoms. The sensory fibers, after passing through the posterior nerve roots, enter the gray matter of the posterior cornua and at once cross to the opposite side of the cord through the posterior commissure and then continue their course upward to the cerebral cortex. In the upper part of the cord the fibers decussate almost immediately after they enter the posterior cornua but farther down the cord we find them running for a short distance more or less vertically in the side of the cord and in company with the corresponding nerve roots before they pass to the opposite side. In other words, the decussations are relatively higher than the corresponding nerve roots the farther we proceed down the cord. In the words of Gowers,[4] "The decussation of the sensory tract is not immediate but occurs somewhat above the entrance of the nerves." This, I believe, is of some importance in the diagnosis of our case, for as Gowers again remarks, "A lesion in one side of the lumbar enlargement often affects sensation on the same side as motion because it damages the sensory path before it has crossed." In our case I can not think the anæsthesia was due merely to compression of the nerve roots by the meningeal trouble, because it came on so early and suddenly and was not preceded by the usual hyperæsthesia and initiative signs of local meningitis. In fact, the whole set of meningeal symptoms seems to have been of later development. Nor can I think that the posterior nerve roots supplying the anæsthetic area were themselves torn or injured in such a way as to be alone responsible for the loss of sensibility, because the anæsthesia lasted too long to be so quickly recovered from. Torn nerve roots are not usually restored in a few weeks' time by mere external counter irritation and the administration of mercury. I assume, therefore, that the sensory tracts must have been injured somewhere near the periphery of the cord, and that this must have been before the tracts which transmit tactile impressions were separated from those which carry the sensations of pain and temperature since all forms of sensibility were abolished from the anæsthetic area.

According to the most recently constructed tables of segmental spinal localizations, the lesions could not have extended higher than the first lumbar segment. The paralysis and anæsthesia stopped quite abruptly at Poupart's ligament anteriorly and the upper part of the buttock posteriorly. There were no girdle pains whatever, either of the body or the limb, to enable me to determine the level of the lesion more accurately. If the original trouble were a subarachnoid hemorrhage, as I fancy it must have been, the blood may have gravitated to the lower part of the spinal column and involved the fibers of the cauda without doing any special damage to that structure beyond compressing it. A clot may readily have formed on the left side of the cord opposite the lumbo-sacral region, there exerted a pressure sufficiently deleterious to prevent the transmission of the motor and sensory impulses in the corresponding tracts as they passed along near the circumference of the cord, and also to have lighted up a meningitis which gradually extended along the whole column and even implicated to a slight degree the membranes covering the brain especially in the occipital region. Such an explanation is the most reasonable to my mind and harmonizes most satisfactorily some of the discordant symptoms of the case. If such be the correct explanation, the case indicates that we may have a hemiparaplegia, especially from a lesion in the lower part of the cord, in which the anæsthesia and paralysis appear upon the same side of the body. Further investigations are needed, however, upon this point, though I feel sure that the textbooks are somewhat too dogmatic in asserting that in all cases hemiparaplegia is a paralysis of one-half of the lower part of the body with anæsthesia of the opposite half.

Columbus Memorial Building.

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[1] Applied Anatomy of the Nervous System. Appleton & Co., N. Y. 1888, page 638.

[2] Pepper's System of Medicine, Vol. v, page 44.

[3] Spinal Localization in its Practical Relations. Detroit, 1889.

[4] Diseases of the Nervous System. P. Blakiston Son & Co. Philadelphia, 1888, page 166.

WHAT SHOULD CONSTITUTE LEGAL RESPONSIBILITY, IN THE MEDICAL SENSE, IN INSANITY?

Read before the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY LANDON CARTER GRAY, M D
PROFESSOR OF NERVOUS AND MENTAL DISEASES IN THE NEW YORK POLYCLINIC

It is high time that we medical men should impress upon lawyers the fact that the question of legal responsibility in insanity should not be determined by laws, but by facts As it is, the belief of English and American jurists is that which is embodied in the statutes of almost all of the States, to the effect that knowing the nature and the quality of an act and its consequences should be taken as a full test As every one in this room will know who is acquainted with the insane, this dictum is worse than ridiculous, for it is false, as there are very few forms of insanity in which the patient is not fully aware of the nature, quality and consequences of an act which he or she may commit Out of this definition of a legal responsibility has grown the legal belief that a person is possessed of testamentary capacity when he or she can talk in a sufficiently intelligent way to evidence a knowledge of the nature, quality and consequences of the will which he or she may be making Indeed, so ill defined is the definition of testamentary capacity that I have frequently suggested to my legal friends that the greatest certainty of having a will admitted to probate would be to establish the insanity of the testator or testatrix Let us briefly examine the facts, not the statute law, about insane patients

All the types of insanity that have been demarcated up to the present time can be classified by

1 The moods
2 The presence of hallucinations
3 The presence of delusions
4 The coexistence of the neuroses
5 The coexistence of organic disease of the brain
6 Traumatic causation
7 Causation from excessive use of narcotics
8 The mental disturbances occurring induced by disease of non-nervous viscera

Mania and melancholia present as their basic symptoms alterations of mood, the former being an exaggeration in slighter or greater degree of good spirits, and the latter presenting the converse When there are hallucinations as the chief symptom around which all the others cluster, there is hallucinatory insanity A persistent delusional condition, at first consisting of delusions of persecution, to which in the course of time are added delusions of self-exaltation, constitutes that type of insanity to which has arbitrarily been given in latter days the name of paranoia, formerly designated delusional insanity Magnan, it should be said by-the-by, maintains that in many cases of this type the delusion of persecution is never succeeded by that of self-exaltation or grandeur Such neuroses as hysteria and epilepsy lend a peculiar imprint to mental disturbances occurring in the course of them These insanities, whose pathology is yet but dimly understood, are happily embraced by the Germans under the generic term of the psycho neuroses, to distinguish them from the mental disturbances which occur in the course of such organic diseases of the brain as hemorrhage, thrombosis embolism, meningitis, tumors, intra-cranial syphilis, and that slow, remittent, insidious encephalitis which is known as paretic dementia or general paresis, and which is characterized by the commingling of characteristic mental symptoms with physical ones Insanity of traumatic causation is usually an insanity due to organic cerebral disease produced by trauma, or to epilepsy from the same cause We are all familiar with the mental disturbances from alcoholism, cocainism, morphinism or chloralism I have but little faith in the frequency of so called reflex insanities, i e, those produced by slight lesions of non-nervous organs, but no one will attempt to deny that mental disease can occur from the widespread vascular, textural and nervous derangements of nephritis, pyeluria, hepatitis, typhoid, peritonitis or septicemia[1]

Of all these varieties of mental disease, the ones that most frequently give rise to medico-legal questions are paranoia, mania, melancholia, general paresis and the insanities arising from the excessive use of narcotics In paranoia the mental condition is, as has been said, a delusional one, generally at first of persecution, to which in the course of time is added another of self-exaltation or so-called grandeur But these delusions are perfectly logical, and the memory and the reasoning powers are intact In mania there is chiefly an alteration of mood, so that the patient seems more vivacious than usual, and in the subacute form this exhilaration may be so slight as not to rise above the level of high spirits, while in many instances delusions and hallucinations are not present, and in most there is the same preservation of the reasoning powers and the memory as in paranoia In melancholia the alteration of mood is that of depression, but in a vast number of cases, constituting the bulk of mental diseases observed in general practice, this depression is so evanescent and slight as not to be greater than that caused by indigestion, a disagreeable bit of news, an unpleasant emotion, and a thousand and one other disturbing factors in life, while in melancholia, as in mania and paranoia, the reasoning powers and the memory may not be at all affected In the early stages of general paresis and in its remissions the element of stupidity is so slight that it can often only be detected by an observer made keen by experience In the mental alterations caused by undue indulgence in narcotics there may only be present some hallucination, some delusion or some unbalanced judgment that can not be evidenced except by observation of the patient through days, perhaps weeks In all these forms of insanity, therefore, it is absurd to test the patient's knowledge of the nature, quality and consequences of an act by merely questioning him For instance, Dougherty, the so-called lover of Mary Anderson, murdered a young Dr Lloyd of the Flatbush asylum, because he believed that Lloyd was one of the agents of a system of legal procedure that had done him grave injustice, and he was proceeding to murder a supreme court justice and about a dozen State and county commissioners of charities whom he thought to be agents of the same legal machinery, when he was fortunately arrested All this murderous action had arisen from his delusion that Mary Anderson loved him and that the world had conspired to prevent his going to her Yet when this man was tried for murder, he insisted on taking the witness stand himself, and stating that he knew perfectly the difference between right and wrong, and the nature, quality and consequences of the act that he was doing when he shot Dr Lloyd The jury found him insane, but there was so much doubt in the public mind that a commission was appointed, of which I was a member, and he was again adjudged a lunatic Judged by his general intelligence—indeed, by his own statements—this man understood well what he was doing Nevertheless, it was evident to every one that his delusions so warped his mind that he did not realize, in the true meaning of the word, what he was doing Nor do I believe that any insane person has a true realization of his acts Never mind how small the flaw may be in his mental machinery, it may be quite sufficient to warp the mind The law clings tenaciously to the old idea of lucid intervals, but alienists nowadays no longer believe in them, and the imperfect science of a former day probably mistook remissions for them No one can catalogue the human mind, except in a very general way So far as we have been able to analyze it clinically, however, it may be said to consist of sensations received by a conscious intelligence in a way that experience has shown to be normal to the human being, as well as of actions springing from this intelligent recognition of sensations If the moods are altered, as in mania and melancholia, there can be no intelligent recognition of sensations If the sensations are faulty, giving rise to what are technically known as hallucinations and illusions, the intelligence is corrupted by false news traveling in over the perverted nerves from the various tissues of the body If there are delusions, the intelligence, in proportion to its intelligence, is the sport of these delusions If the intelligence itself is confused, causing what we call stupidity, who can venture to prophesy what the mental outcome will be? If erratic actions arise from diseased brain cells receiving normal or perverted sensations, these very actions are evidence of a warped mind I could make this short recital of instances much longer if I were to go into all the clinical proof at my command of how a seemingly partial mental defect is really a general one

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[1] In all these types of insanity hallucinations illusions delusions and alterations of mood may occur but it is the predominance of one or the other of these symptoms that is the basis of classification

But I think that you will agree with me that the only safe test of the legal and testamentary responsibility of a man lies in an answer to the simple question Is he insane? If he is, he is not legally responsible for his acts, nor has he a testamentary capacity Nor should this question be determined by questions put by lawyers, by fine-spun metaphysical definitions of mental aberration or by evidence of seemingly intelligent acts and motives, but rather by examinations made by physicians competent to decide whether the man in question is suffering from one of the recognized types of mental disease When a physician testifies that a man is sick with some disease affecting a non nervous organ, no lawyer would dare to raise a Homeric roar of laughter by asking him for a general definition of sickness, instead of having him localize the disease and then making him state the usual symptoms of this malady Is it not true that the same common sense should be applied to mental diseases? I think so, most assuredly

DR J G KIERNAN—It seems to me that Dr Gray's strictures are much more applicable to many of the eastern States and perhaps a few of the western, than to all Now in Illinois, although the practice has slightly departed from the decision enunciated in New Hampshire, and which is practically the outcome of the old common law before the ecclesiastical lawers got to fixing notions about responsibility, the principle still holds that each case is tried on its merits In the next place the State must prove beyond a reasonable doubt that the man is insane, if the defense raises even a suspicion of insanity In New York the right and wrong test was swung into the code under the influence of David Dudley Field, with the old notion of deterring the insane from crime It so happened that David Dudley Field himself had a relative who committed a crime and under that same test was sent illegally to an insane hospital Even in New England we find judges on the bench applying the strict letter of the code in trying such cases as that of a woman who has killed her child with the full knowledge of the consequences of the act It seems to me that all these cases can safely be left in a great degree to evolution The more you attempt to express matters in the statute the more you tend to crystallize them and interfere with the due course of things The tendency is directly opposite from what is usually assumed The proper course is to deal with each case on its merits and not to lay down any general rule, and that is the old doctrine of the common law Even old Sir Matthew Hale's divisions of insanity are correct, except when he is influenced by the ecclesiastical law notion of responsibility, when he gets sadly twisted

DR FRANK R FRY—I would like to ask what the Doctor means by having established a suspicion of insanity in a legal way, so that the case might be presented on that basis I am not familiar with what the method is in the State of Illinois

DR H M MOYER—The practice in Illinois is under the common law, and it seems to me from a careful study of the statutes of other States and those States like New York that have codes, that the practice that holds under the common law is far preferable in these cases The proceeding in Illinois is substantially this a person that is charged with crime is indicted Then it becomes the duty of the State in the first instance after indictment when the person is called upon to plead, to accept the plea of not guilty, if insanity is to be the defense The State then goes on and makes its own case as to the crime Of course that is perfunctory where it is practically admitted that a crime has been committed Then the defense comes in, if there is no defense on the merits, if insanity alone is rested upon, to prove the mental condition of the patient What is meant by the suspicion raised? It is this no matter how much or how little is raised as to the mental condition of the patient it must be overcome by the State, and the rule of the law that is given to the jury is that the State shall make out in rebuttal after the defense is put in, and prove the person sane beyond a reasonable doubt, which means that every scintilla of evidence tending to show that the patient is insane must be overcome by proof We have tests that are propounded and used, and sometimes they go into our instructions but the common law is so construed in that State that the tests are practically inoperative, because there is always an instruction asked on the part of the defendant, taking all the facts of the law into consideration, does the jury find that the reasonable doubt is in favor of the prisoner That brings it down to a matter of the jury entirely I will say regarding Dr Gray's paper that it seems to me that he is a little in error on one point He says that insanity if present should absolve a man from the consequences of his act and should not entitle him to testamentary capacity The rule of common law as most States give it, is that there is a different degree of mental aberration to absolve from responsibility for a criminal act than will permit a man to will his property The rule of the law in determining whether a person has testamentary capacity or not is, Did the person know and comprehend the manner in which he intended his property to descend and to whom, if he comprehended these two factors it has generally been held that he has testamentary capacity Certainly, it admits of a degree of mental defect far greater than would excuse a person for committing a crime I think that we shall never reach any better basis than that of the common law, although there are faults that can be found with it in some respects It is to be remembered as the darkness of mental disease settles down on a man's mind it does so gradually, there is the beginning of twilight settling down into hopeless dementia and all stages between those, and there must be an arbitrary division fixed somewhere, and I do not think that arbitrary division can be fixed by medical men or by lawyers Nobody can fix it, because it is the same thing as after sunset, when the sun goes down, there is a period of all shades of twilight into absolute darkness No one can say where day leaves off and night begins absolutely So in mental disease, some such flexible rule as is adopted by the common law I believe to be as near perfection as we shall ever get in dealing with the matter of insanity as a defense for crime

Dr L C Gray—I did not know that the State of Illinois had a law so entirely different from that of New York, but certainly the textbooks of law do not give any such rule as seems to be current in Illinois, and the test taken altogether of the American States is the test of the individual knowing the difference between right and wrong measured in the consciousness of the act There are many absurd laws which judges will attempt to get around by permitting a laxity in their application, but as long as those absurd laws remain on the statute book, some martinet of the law may make you follow the hard and fast line Whatever the practice may be, the statute law can always distort the practice The fact is that in the majority of our States the old test of responsibility of right and wrong and the knowledge of the nature and consequences of the act remains, we in New York are constantly asked to solve that question by the testimony put at our disposal and it leads to all sorts of fraud and injustice, whereas a much simpler test would be simply, Is the man insane? It is no answer to say to that, that we do not know all the forms of insanity We can make out the majority of cases that come before the courts It is better to have some test than not to have any at all, as we have now, even though that test is not a perfect one

I should disagree with Dr Moyer in regard to the gradual obliteration of the mental faculties and the ultimate passage into dementia, because there are different forms of insanity, acute and subacute and chronic, and their onset may therefore be very sudden, or on the contrary gradual The onset of transitory frenzy is very rapid indeed Then again a great many forms of insanity like paranoia do not pass into dementia, and a great many of the cases of mania and melancholia have no inherent tendency toward dementia, so that I do not think that that line of argument will exactly prove to be the safe one I do not think that any man's mind that is affected by disease is a safe mind to be left to dispose of his own goods and chattels The statute law or any law made by sane minds, can do better than the mind of any insane man no matter how slightly affected, and you can not tell with all the myriad reflexes and connecting causes, how much of a given act or of a given opinion has been made up by diseased action and diseased reflexes It is utterly impossible for any man to unravel that knot, and taking the common sense of it, is it not much safer to trust the disposition of that property to the law that has been thought over by competent and educated lawyers and which is so good that many able lawyers nowadays prefer to leave their property to be distributed by the statute law, rather than to say that the individual shall have the right to disinherit her nearest relatives, as was the case in the city of Buffalo of Mrs Millard Fillmore, who disinherited every legitimate heir, to encourage a pseudo science and religion, by giving her property to the city for all sorts of wild purposes, leaving her heirs in absolute poverty It is no use to discuss what would abstractly be the best, but what is in the majority of cases an improvement on the present system, which is no system at all, and which was simply a wretched system when originally proposed, and a disgrace to our present civilization, inasmuch as it takes no ground whatever as to what has been done in psychiatry for the last fifty years

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LEGAL CRITICISM OF MEDICAL EXPERT EVIDENCE

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY CLARK GAPEN, M D
OMAHA, NEB

A recent writer in the *Columbia Law Times* somewhat intemperately characterizes medical expert testimony thus "Of all the cant that is canted in this canting world expert medical cant is the most pernicious Of all species of evidence offered in a court of justice, none, not even the testimony of the accused, when a witness on his own behalf is more freighted with suspicion than is the evidence of the medical expert" And quoting Lord Campbell he adds "They come with such a bias on their minds to support the cause in which they are embarked that hardly any weight should be given to their evidence" The writer then goes on to say that the medical expert in his first estate was a formidable ally of justice, but that the corruptions of the world have demoralized him "These doctors," says he, "are of the earth, earthly, and their virtue, if not an unknown quantity is flagrantly insufficient in quality" He charges our profession with a vast amount of "very gaudy and unembarrassed lying," and believes the average doctor to be possessed of such an exalted opinion of his own accomplishments and such a corresponding contempt for antagonistic views as to seriously cripple his judgment "This serene Olympian" in the opinion of our author, "mounts the witness stand with a chilling and withering hauteur, a composure and touch-me-notishness that belong only to the elect" This intemperate philippic against expert evidence has recently passed around the newspapers and the echo is heard in multitudinous editorials on the subject

"Doctors," says one, "seem to regard their profession in such cases much as lawyers do theirs They are expected to use their knowledge and skill as lawyers do theirs to aid in the conviction or acquittal of the accused The result is the discredit of expert testimony It is hardly more valuable than the asseverations of the attorneys" Nor are these criticisms confined to recent times, or the newspapers and legal journals No less an authority than Justice Grier of the Supreme Court of the United States said in an opinion written many years ago "Opposite opinions of persons professing to be experts may be obtained to any amount, wasting the time and wearying the patience of the court and perplexing instead of elucidating the questions involved in the issue." Chief Justice Chapman of Massachusetts may also be quoted as saying that "experts might be found to testify to any theory however absurd," and the learned Chief Justice Redfield of Vermont, author of the best treatise on wills extant says "Experts are beginning to be regarded much in the light of hired advocates, and their testimony as nothing more than a studied argument in favor of the side for which they are called." Justice Davis of the Supreme Court of Maine went farther than the others, however, when he said "If there is any kind of testimony that is not only of no value, but even worse than that, it is that of medical experts." With all this weight of very learned testimony against him we might reasonably conclude, that the case of the medical expert witness was effectually disposed of. We still find him, however, though somewhat disfigured yet an important factor in the various litigations that arise. There can not transpire a business transaction of any kind, an act civil, or criminal, of which the courts have jurisdiction but may involve some question demanding the attendance of the medical witness. Criticisms such as I have quoted from bench and press are not, however without foundation in fact. Some to be sure are grounded in a purely ignorant and asinine dislike of another profession. Some due to the bitterness of defeat. Corporation attorneys, no doubt feel themselves often aggrieved and justified in doubting both the honesty and value of much so called medical expert testimony. Let us look at the causes underlying these conditions and ascertain if possible what are potential on our side, and what active on the side of the legal profession, to bring about this unhappy state of mind in our brother profession and lay upon ours this stigma. The first and perhaps most potent cause lies with the attorney himself. He has a case—is perhaps unprepared both in respect to his knowledge of the case and a sufficiency of evidence. He casts about for some bright medical man to assist him. I am afraid he does not always care most to know how unimpeachable is the man he selects. What he wants is help. Honest help if he can get it—if not, help. He wants some one to help him make out his case, which usually means that he has a mark set up and he wants some medical man to swear at it. This matter of the oath is possibly seen from somewhat different points of view by the lawyer and the doctor. Theoretically the oath is to the lawyer a sort of fetish. In all his books and lectures, it has been enough to say "under oath" to express to his mind the highest degree of certainty and solemnity. I doubt if the physician and layman has any adequate conception of the feeling inspired in the breast of the lawyer by the term "under oath." But in some other respects the law in practice does not maintain so high an ideal of professional morals and conduct. It is not generally regarded to be to the lawyer's discredit that he resort to almost any means of winning his case. In legal practice that is constantly done which would make even the doctor shudder for the welfare of the soul of his professional brother in the law. It may be that the great and solemn phrase, "under oath" is not often enough uttered in the hearing of the student of medicine. It may be that he has not in the language of the Buddhist, "gone into the forest," and seriously meditated what it is to be a witness under oath, but certain it is that he has not been able to see such a vast difference between telling a lie and swearing a lie. He that does the one, will find a way to do the other. When the doctor is on the witness stand, however, the lawyer (on the other side of the case) experiences a sudden expansion of his conception of the gravity and importance of strict adherence to the naked truth. But when the witness is his, the lawyer is too apt to become willing for him to strain any part of his conscience that will help the case. If the doctor is weak enough, he will be thus used again and again, but the very attorney that uses him will cherish a contempt for him. The solemnity of the oath should not be undervalued nor its importance as a safeguard in evidence be lightly considered. But the truth is the truth and at all times most sacred. "Every place a temple" to truth and justice. In the large majority of cases involving medical, surgical or psychological questions the attorneys are merely "crammed" for the case. In the very nature of things this must be so, for it is manifestly impossible for any mere lawyer to have other than a very partial view of the questions involved. He may have acquired knowledge, but he can not have acquired that experience which vitalizes knowledge. It is oftentimes very laughable to realize how partial this view is. Only the fact that the opposing counsel is equally ignorant and the jury still more unenlightened keeps the case from breaking down. I have sat throught a trial for manslaughter and heard a bandying back and forth of medical and surgical terms by the opposing counsel that would have kept a medical college in a roar. But with this partial view the lawyer sets up a theory of the case for the poor doctor to work to, and he is expected to help it on whether it would have been his view or not if left to himself. The course chosen, everything must bend to it, everything must be done to help it on, and everything suppressed that will in any manner retard. The trial of the case then becomes a mere contest of wit in adducing and suppressing evidence. Of course this is all wrong and no one knows it so well as the well informed lawyer. It is not common sense, much less common justice. Any intelligent member of the bar will tell you that as at present conducted, the trial of a cause involving a medico-legal question is a mere farce, as compared with the trial of a cause involving a pure question of the law. The reason is simple. The lawyers trying the case understand the questions of law involved and it is Greek to Greek. But they neither know nor understand questions in medicine, surgery psychology or toxicology. This great fault in our jurisprudence is probably in the main due to the jury system which we have not yet outgrown, and which we are not likely to outgrow for some time to come, notwithstanding the fact that no country in Europe has a jury but England. Another cause is the desire of some lawyers to pose before John Smith as a man who knows everything and to hear John remark that he (the lawyer) knows more medicine than all the doctors. Of course John knows. I believe it will be found an invariable rule that the greater the lawyer the more will he seek and value assistance by those specially trained and informed. The lawyer that merely aims to pose before Smith and expects to win his case by hook or by crook needs little counsel. It takes a fair sized lawyer to realize that he doesn't know it all and is merely making a fool of himself when he attempts to utilize knowledge of which he has only a mere smattering. The condition referred to can be corrected only by a change in the statutes of the several States relating to the selection and calling of experts. The expert should be selected by the court from lists presented by the counsel, as advisory to it, and wholly with reference to his special knowledge of the question involved, which question should be submitted after the evidence is all in, in the form of one or more hypothetical questions based upon all the evidence. "Opinions on the case" should not be tolerated in any form. They are a plain invasion of the province of the court and jury. We should not, however, conclude that the trouble lies wholly with the law or the lawyer. A large part lies with us and in our faulty systems of medical education. We educate the student in medicine, surgery, bacteriology, pathology, etc., and forget the all important fact that he is to become a *citizen* of a community and that great and peculiar responsibilities resulting out of his professional duties and relations are to be laid upon him by the law. The very first case to which he may be called may involve a grave legal responsibility. It may be a case of murder or poisoning or involve a question of mental competency or responsibility. Nearly every medical college has a so-called chair of medical jurisprudence, but what does it teach? It usually repeats the mummery of some textbook of the science, merely rehearsing in a weak way what has been better taught in other departments by teachers specially qualified. The instruction is uninteresting to the student and valueless. What should be taught are the special facts of medico-legal science, not taught elsewhere, and the legal duties and responsibilities of the practitioner in his triple relation of *citizen, practitioner of medicine* and *expert*. In short he should be given a forecast of the legal experiences he is about to encounter in the many and varied relations upon which he is about to enter. If he practices at all he must come into contact with law in some manner. This is not a kind of practice he can choose or let alone. He should therefore be especially and carefully taught his responsibilities and duties under the law. He should be taught to know when he is placing himself in a position that will or may make him a witness, and his eyes should be opened to the things he should see and note to make him a reliable and useful witness. He should also know *how to be a witness*—how to prepare and demean himself, that he may not be disconcerted by the ordeal or reflect discredit upon himself and his profession. He should know that to be frankly truthful, to be calm, self contained, direct and plain in his statements, simple and non-technical in his language, avoiding pomposity and high sounding phrases is to be a good witness and that the converse is to be an ass. Being untaught in these important practical matters he goeth forth as a lamb for the slaughter. I have known a middle aged physician filling a high position, nearly ruined professionally and an exceptionally well-educated young physician driven out of a city by the want of the knowledge of which I am speaking. That students go forth unequipped in this regard is not their fault. Twelve years of teaching both law students and medical students has taught me that law students are always interested to know something of medical science, and medical students eager to know that part of the law which concerns them. Another cause of the disrespect of medical expert evidence is the common custom of participating both as counsel and witness in the trial. This, too, is the mistake of the lawyer. He knows better. The doctor does not. A lawyer shuns the witness stand and especially in a case in which he is counsel. It is universally conceded to be bad practice for counsel to testify and important evidence will often be sacrificed rather than violate this rule. Only in extreme cases is it countenanced. But the lawyer not only permits, but encourages the physician to do this very thing—act as a witness and sit by as counsel with the effect of impairing the confidence and respect of court, jury and public in him and in his testimony. It is a practice to be condemned in no uncertain terms. Another grave source of impairment of confidence is the fact that there is a large and growing class of medical men who pose as professional witnesses—expert swearers, so to speak. Men who are tempted by the publicity and the emoluments to frequently participate in trials as experts, even where they are not specially qualified to be experts either by learning or experience. The courts themselves are to blame for this. It is within the discretion of the court whether or not a given witness is expert in respect to the particular question involved. The adjudications are very satisfactory on this point and only need to be lived up to. The legal rule and definition of expert is "one instructed by experience" (Bouvier.) To be competent the individual must be in some way peculiarly qualified to speak on the subject (3 Bosworths, N. Y. 7.) The fact of special skill must be established or witness rejected (Ordronaux, 126.) A court may hear evidence to satisfy itself that a witness is really what he assumes to be before admitting him to testify (6 Rand, 704—12 Alab., 648—1 Munn, 125). It is often said that the medical profession is narrow, both in its scope and tendency—that the doctor gets rutted and never knows or thinks anything else than medicine and each year grows narrower. I believe this to be in the main unfounded, but in respect to knowledge of the law, which every man is presumed to know, it is true. It is not to the discredit of the lawyer that he knows many things other than the law. Why should it be to the discredit of the doctor that he knows something besides medicine? Are we not too modest in this respect? We should not forget that some of the greatest lawyers this country has produced were first doctors. The late Justice Miller, of the Supreme Court of the United States and Judge Dillon are examples. May we not do something to dissipate the idea that we of the medical profession are not to look beyond the horizon of our own calling?

DR. J. G. KIERNAN—There are two or three points with which I agree and others in which I dissent from Dr. Gapen. There is a certain class of lawyers including criminal lawyers who are exceedingly high, while others are about as low down as possible. That class of lawyers does not, as Dr. Gapen has stated, think the less of a man because he lies. I have known a specimen of that stamp denounce every doctor who appeared against him, as venal, even though he had approached every one of those doctors and attempted to retain him in his case. Furthermore, it is a growing practice among a certain liberal set of criminal lawyers to form their theory through the aid of a physician in a given case The physician forms a theory of a case on the facts stated by the lawyer, and the testimony agrees generally much more thoroughly with the theory so formed than with the hit-or miss method usually employed That was the case with the medico-legal issues arising in the Cronin matter In that case the attorneys consulted a physician who never appeared in the case and who made up the minor theories on which the blood question and the other questions were afterwards proven, and every one of the questions drawn up by him were laid before the experts afterwards With regard to the proposed remedies by the courts, I would say that it seems to me that the true remedy has been suggested by Dr Gapen, namely, instruction in our colleges in the first place, that in criminal cases every circumstance tending to prove innocence must be taken into account, and furthermore everything must be construed in the light of innocence, and guilt proven beyond reasonable doubt We find every day, physicians considering certain cases as exceptional and therefore not taking them into account, but swearing positively to a certain set of facts to which there are exceptions On the other hand, the point should be brought out that the question is one of preponderance of evidence merely in civil cases, and instruction should be given in that line as well as in criminal cases and the distinction clearly shown True medical jurisprudence is really not taught in our colleges, but in the place of it the Gradgrind method is used of pouring in mere facts

THE CHAIRMAN—I think many of the reader's points are well taken, still I do not believe that some of his remedies are practical It is a frequently made suggestion, that the trouble with reference to expert testimony and the evils nnected therewith, could be overcome by making the ts the advisers of the court The method suggested r Gapen is one, others have been suggested, but in main they are on the same principle It has been sug sted to have official court experts A very considerable xperience in medico-legal matters leads me to believe that this plan would not work any better than the present except, perhaps, occasionally, at least, I am doubtful of it, and I believe as Dr Kiernan has said, that probably in Europe they are finding it somewhat of a failure It would be impossible for court experts to give opinions in an open jury trial, for or against a man, without the party accused being allowed full opportunity for expert and every other sort of defense Otherwise, it would be taking away the rights of the individual, and simply would result after a time in most of the cases that the court expert would be submitted to the same sort of examination and cross-examination as anybody else, and with this additional difficulty in many cases that the court expert would be a political or personal or some other sort of obnoxious appointment, nor would the difficulty be removed by allowing the judges to call in in special cases a court expert I do not see how we could get around the difficulty in this way, although it has often been suggested I think I understood the doctor to say that opinion should not be tolerated

DR GAPEN—I used the expression, "opinion on the case," and I used it technically, not in the ordinary sense

DR KIERNAN—I understood that you meant hypothetical opinion

DR GAPEN—No, no

CHAIRMAN—Do I understand you to refer to the opinion that experts are called upon to give in court?

DR GAPEN—On that point you agree entirely with me I do not say that an opinion should not be entertained by the expert An opinion is entirely proper, but an "opinion on the case" in law is a technical expression, if the expert states what his opinion is about the case, then he puts himself in the position of the jury

CHAIRMAN—As I understand it, the expert or witness will testify as to facts that come within his knowledge, in an examination of an individual, and he gives his opinion on the facts which he has studied himself, or his medical opinion on the facts which are stated in a hypothetical question or in some other way, he gives no opinion upon responsibility, for instance, in a case of insanity He does not assume the function of the court or the jury, but he gives an opinion upon the facts he has learned in investigation, and an opinion upon a hypothetical question, that is he gives an expert opinion upon it and it seems to me perhaps the doctor and I are agreed upon that matter

I fully agree with him in regard to teaching medical jurisprudence in our institutions, and I think with Dr Kiernan that the true solution of this problem like many others must be in the advance of education, and every other method of attempted improvement in these matters seems to me will fail As to the medical witness acting as counsel, I believe that very often properly and usefully, he acts as adviser to the attorney on the side that he happens to be retained for As Dr Kiernan said it is a common practice, and I do not see any objection to it, for the witness and the lawyer to go carefully over the case in order to see whether or not the witness will testify If he finds in going over the case that he does not agree with the gentleman who wishes to call him he refuses to testify, and in the same spirit he can, if he does agree, assist in the preparation of the case I agree with him, however, in reference to the injurious influence on the case which the appearance and particularly the manner in which a medical man sometimes appears in court assisting counsel I have had some experience in that and I have seen others in this position I avoid it wherever possible Lawyers sometimes insist on being assisted in the examination of witnesses My own experience teaches me that with the jury particularly, and I have no doubt with the judge in many cases, this often acts against the case very much and it would be a much better plan in the vast majority of cases for the witness to have nothing to do with the counsel in court except upon the witness stand I do not see anything morally wrong or legally improper in his giving assistance if he gives it in the proper spirit Now as to courts excluding experts I think it would be a very difficult matter in many cases for courts to say, and in many cases it would be very easy, but I remember only once in many trials seeing the court exclude a medical witness as not being competent to testify That was in a case of a man in Philadelphia who certainly was incompetent and who testified in a well known case there that he had made three examinations of the person who was on trial, a woman, and the district attorney in cross examination asked him what these three examinations were that he had made, whereupon he calmly stated that he had made a digital examination, a general examination and a speculum examination at the same time of the patient This man was ruled out

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Dr William Thomas Bishop—One phase of the medical witness which has not been brought out is of great importance As a general thing the expert would take care of himself, if medical jurisprudence were taught more fully and in a better manner than at present For instance, in the case of an accident on a railroad, if the physician knew just exactly how to make the examination and how to get the information when he first saw the patient, that would be a matter of the most vital importance in cases of injury which may result in death, also in cases of altercation, of abortion, etc, if physicians were educated up to getting what would be legal testimony, that would be worth a great deal But there is one misfortune about the medical witness and that is he often puts himself out of the way to get on the witness stand, he thinks it a smart thing to put himself on exhibition Another smart thing that he often does is to put himself in a position to antagonize some other practitioner I have seen a good deal of that My father was a criminal lawyer and I was raised in his office, he wanted me to be a lawyer, but I did not care for it, yet I have had some chance to judge of that matter, and one of the great troubles is that these experts get on the witness stand and do not for a moment admit that they are mere citizens the same as other witnesses, but want to claim privileges, here they make a great mistake, they are imprudent and indiscreet in their replies to counsel on one side or the other Another thing is, they undertake to explain the lawyer's questions instead of making the lawyer explain the questions himself, undertake to answer two questions with one answer and they make a mistake, but in regard to experts, the principle that applies to medical men, civil engineers and everything else is so broad that we can not interfere with it, that is that the judge is the one who determines as to the qualification and the capacity of a person to testify on a hypothetical state of facts, there is almost a general rule to this effect and all questions that you are asked as an expert must be asked and answered on a hypothetic basis, not as a matter of fact That runs all through the law, but if the doctors were a little more careful in giving a well protected answer instead of a broad and vulnerable one, stating that such a thing is utterly impossible and all that sort of thing, they would not get themselves in half as much trouble as they do

The expert who gives the lawyers advice outside of the court room and who assists in the preparation of the case is all right, but sometimes he is decidedly offensive You will see him crawling all over counsel on the other side, and he discounts his usefulness before the jury and before the court He certainly is simply committing professional suicide I think that if the legal position that the medical man occupies in the court is recognized as no different from that of any witness, if that were impressed upon the medical profession more fully, it would save the medical expert from a hundred indiscretions All he has got to do when he sees that the lawyer is crammed for him on a certain point, is to switch off on another line That will break the lawyer up

Dr Clark Gapen—I notice that I have used unconsciously legal terms that are misunderstood by us as medical men, and I think an explanation of these terms will perhaps remove the necessity for some of the criticisms that have been offered For instance, I used the term "witness as counsel" I do not mean by that that the witness shall not consult freely and advise freely with counsel in respect to the case, but when I say "witness as counsel," I mean counsel in the court room The law does not understand anything else in speaking of counsel, except as counsel in the case in the court room You will constantly see medical experts and medical men sitting by lawyers and advising them, and virtually acting as counsel The lawyer is a mere parrot repeating the words the doctor has put into his mouth, and that is what I object to There should be the freest consultation, and the freest advisory relation between the expert and lawyer before the case and during the case for that matter, but there is no better way for a lawyer to commit professional suicide than to have the medical expert sit by actually as counsel in the case

In respect to the term, "opinion on the case," that is a legal phrase and has a very distinct meaning in the law A lawyer would not hesitate on that a moment An opinion is a very different thing from an "opinion on the case" Dr Emerson has very well illustrated that You can ask a medical man, stating the evidence that has been adduced, Do you think such symptoms as these indicate insanity? What is your opinion as to the mental condition of an individual who presents these symptoms, enumerating all the symptoms that have been presented, now you give your opinion with regard to that There is no objection, whatever, to giving an opinion in that case But when you say, Have you heard the evidence in this case, and what is your opinion as to whether the prisoner is sane or insane? That is just exactly what the court and jury are there for to determine, and every supreme court has reversed cases where questions like that have been asked instead of the proper hypothetical ones It is a direct invasion of the province of the jury It may be a little unusual to medical minds to make the discrimination, but there is from a legal point of view the widest discrimination between giving an opinion on that identical case and giving an expert opinion relative to the facts involved in that case lawyers to form their theory through the aid of a physician in a given case The physician forms a theory of a case on the facts stated by the lawyer, and the testimony agrees generally much more thoroughly with the theory so formed than with the hit-or-miss method usually employed That was the case with the medico-legal issues arising in the Cronin matter In that case the attorneys consulted a physician who never appeared in the case and who made up the minor theories on which the blood question and the other questions were afterwards proven, and every one of the questions drawn up by him were laid before the experts afterwards With regard to the proposed remedies by the courts, I would say that it seems to me that the true remedy has been suggested by Dr Gapen, namely, instruction in our colleges in the first place, that in criminal cases every circumstance tending to prove innocence must be taken into account, and furthermore everything must be construed in the light of innocence, and guilt proven beyond reasonable doubt We find every day, physicians considering certain cases as exceptional and therefore not taking them into account, but swearing positively to a certain set of facts to which there are exceptions On the other hand, the point should be brought out that the question is one of preponderance of evidence merely in civil cases, and instruction should be given in that line as well as in criminal cases and the distinction clearly shown True medical jurisprudence is really not taught in our colleges, but in the place of it the Gradgrind method is used of pouring in mere facts

THE CHAIRMAN—I think many of the reader's points are well taken, still I do not believe that some of his remedies are practical It is a frequently made suggestion, that the trouble with reference to expert testimony and the evils connected therewith, could be overcome by making the experts the advisers of the court The method suggested by Dr Gapen is one, others have been suggested, but in the main they are on the same principle It has been suggested to have official court experts A very considerable experience in medico-legal matters leads me to believe that this plan would not work any better than the present except, perhaps, occasionally, at least, I am doubtful of it, and I believe as Dr Kiernan has said, that probably in Europe they are finding it somewhat of a failure It would be impossible for court experts to give opinions in an open jury trial, for or against a man, without the party accused being allowed full opportunity for expert and every other sort of defense Otherwise, it would be taking away the rights of the individual, and simply would result after a time in most of the cases that the court expert would be submitted to the same sort of examination and cross examination as anybody else, and with this additional difficulty in many cases that the court expert would be a political or personal or some other sort of obnoxious appointment, nor would the difficulty be removed by allowing the judges to call in in special cases a court expert I do not see how we could get around the difficulty in this way, although it has often been suggested I think I understood the doctor to say that opinion should not be tolerated

DR GAPEN—I used the expression, "opinion on the case," and I used it technically, not in the ordinary sense

DR KIERNAN—I understood that you meant hypothetical opinion

DR GAPEN—No, no

CHAIRMAN—Do I understand you to refer to the opinion that experts are called upon to give in court?

DR GAPEN—On that point you agree entirely with me I do not say that an opinion should not be entertained by the expert An opinion is entirely proper, but an "opinion on the case" in law is a technical expression, if the expert states what his opinion is about the case, then he puts himself *in the position of the jury*

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Now with reference to the calling of experts, I would not do away with the English system at all, but I think that experts should be called something in this way each side should hand in a list of experts that he wishes called and the court should select an equal number from that list after hearing evidence, if necessary, with regard to the qualifications of any of the men on the list The court can, as it were, stop the proceedings and make a side issue of it as to whether this physician is expert with reference to the particular question, and the court should do so I think the greatest trouble that arises is in bringing in men who know nothing about the particular subject involved and opposing them to men who are learned Why the jury is very likely to conclude that the ignorant man knows the most, because the learned man makes discriminations which are absolutely incomprehensible to them The test should always be experience, and that test is recognized by the law

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PUERPERAL HEMORRHAGE

Read in the Section of Obstetrics and Diseases of Women at the Forty fourth Annual Meeting of the American Medical Association

BY JAS P KERR
PITTSBURGH, PA

The subject which I have the honor of bringing before you is one which demands as much consideration as any in the whole category of medicine or surgery, because it is one of the most frequent complications of labor, and if the means and remedies are not applied and administered speedily and effectually, death is sure to ensue

It is most apt to come on at a time when least expected, and if not properly treated to be rapidly fatal Practitioners in general are too apt to consider all cases of labor normal, and not make any preparations for this accident, which is likely to occur at any time, so it is our duty to impress upon them the necessity of careful preparation and of a thorough study of each individual case Obtain, if possible, the patient's family history, discover whether she is, or is not, of a family of bleeders, and how much blood she has lost during her regular menstrual periods If a multipara, ascertain whether she has had hemorrhage at her previous confinements, how many children she has borne, and the length of time between each conception I am aware of the fact, gentlemen that in a country so cosmopolitan as ours, the general practitioner (who is usually called upon to fight these battles single-handed in the dead hours of the night, when assistance is far away) occasionally does not have an opportunity to see his patient until summoned to her "lying-in" bedside, consequently we oftentimes know nothing of our cases until brought face to face with them

There is no class of cases which require more prompt action, cool and wise judgment, than that of puerperal hemorrhage The golden rule of surgery must be obeyed to the letter, that is—"do not let your patient bleed to death," and to prevent that requires, first, a preparation for it, and second, a prompt application of the means and remedies which you have provided Picture a case of puerperal hemorrhage The obstetrician is called, finds the mother on her "lying-in-bed" suffering the throes of a confinement, her heart is buoyed up by hopes and expectations that her agonies will soon be over, and that she will soon press to her bosom a living issue of her womb, such hopes and expectations can only be experienced by a woman on the "lying-in-bed" Finally the child is delivered, the mother is happy and her friends are rejoicing, when suddenly without a sign of warning the life-giving fluid begins to flow away in torrents, we hear the death-like gurgle, we see the bleached and anxious expression and the purple lips, we feel the clammy and velvety condition of the skin which always supervenes a great loss of blood Our patient is pulseless, very restless, pupils dilated, and to all appearances the "King of Terrors" is about to invade this home,—and instead of joy and pleasure, we will have tears and sorrowing This woman, who has children dependent upon her, who are dear to her, and to whom she is dear, is cut down in the full vigor of womanhood without one moment's notice The time to act is at hand, we have no time to call a consulting physician, we must act promptly to save the life of this mother and wife

Then do you wonder that we insist so much upon a thorough knowledge of this subject, when a patient's life is thrown in the balance so suddenly, and nothing can save her except the prompt and skillful action of her attending physician who, to act, must have a thorough knowledge of the subject and be able to meet all emergencies? To be able to remove the cause and to apply the means and remedies which will put a new life in that prostrate form, and restore the wife to her husband, the mother to her children, and bring joy and happiness back to that household is characteristic of a true trustworthy physician

The skillful and experienced obstetrician who considers the responsibility which devolves upon him, the implicit confidence placed in him by his patient and her friends, has in consideration all the complications which may befall her during her parturition, he also considers by what means he is to successfully combat these complications, should they arise, to save the life of his patient

The necessity of strict asepsis is apparent to every one in the lying-in chamber Always hope for a speedy termination with happy results, but be prepared for any emergency which may arise, who can tell when, after the delivery of the child, he may be compelled to introduce his hand into the uterus to control a fatal hemorrhage, and would it not be criminal, with our knowledge of asepsis, to carry septic material into that uterus, and endanger the life of our patient? It only requires a few minutes to render your hands, at least, practically aseptic

We believe if there was more attention given to aseptic midwifery, the mortality would be much lower This brings us to the consideration of a class of cases which we encounter occasionally during the walks of obstetric practice, which strike the heart of the accoucheur with alarm, because of the gravity of these cases in the hands of the most skillful obstetrician I refer to accidental hemorrhage This accident is caused by the premature detachment of a normally situated placenta, which may be either partial or complete It may occur at any time during pregnancy, but rarely until the later months, often not until labor has commenced When the blood makes its way between the decidua and the membranes appearing per vaginam, we then have a typical case of accidental hemorrhage, but the blood may be retained in the uterus, constituting internal or concealed hemorrhage In concealed hemorrhage the blood collects either in the cavity formed by the central detachment of the placenta or between the uterine wall and the membranes, or in the amniotic cavity, or free in the uterus, but retained by a completely obstructing presenting part Accidental hemorrhage is comparatively rare, especially the grave form The detachment of the placenta causing this complication is most frequently due to an injury, such as a blow on the abdomen, or a fall Emotion or over-exertion may start a separation of the placenta If that imperceptible uterine action that goes on just before labor sets in should be unusually violent it may cause a small vessel of the placenta to yield, and the effusion which would be the result would act as a foreign body and excite further uterine action, and a partial or complete separation of the placenta would be the legitimate result It may also be the result of some of the general diseases, such as typhoid fever, variola and scarlet fever, or of some of the local diseases, such as albuminuria, acute yellow atrophy of the liver, also degeneration, and disease of the placenta itself It is generally met with in women who have borne many children, and in rapid succession, and in those who are suffering from anemia or impaired health from any cause It is rarely if ever met with in the primipara I had the misfortune to see a woman die from this accident a few years ago I have stood by the bedside of many poor individuals, in all conditions and circumstances of life, and watched the last spark of life expire, but I have never had an experience so sad as this one If there is anything that will strike the responsive chord in the heart of man and set the strings of sympathy in tune, it is to stand by the bedside of a dying mother and see the human life ebbing away Mrs L, 37 years of age, the mother of six children, who was expecting to be confined at any time, a woman of good family history, she had not had any complications during her previous confinements, never had an abortion or miscarriage, a woman of fine physique, but whom I had never seen until summoned to her dying bedside On the morning of the accident she arose at the usual time, and expressed herself as feeling as well as she had at any time during her pregnancy I presume she had albuminuria, from the condition of her feet and limbs, and from the symptoms which I elicited from her husband I was called about 11 30 A M She had not had any pain, had not received an injury, the uterus was not greatly distended The accident was apparently without any cause except the possible albuminuria, and came on without any warning There was a sudden gush of blood which rendered the woman pulseless, in fact when I arrived she was completely collapsed and still bleeding I immediately lowered the head of the bed, injected ergot, brandy and ammonia hypodermically I tried to excite uterine contractions by external manipulations of the uterus which was soft and flabby Made an examination, found the os dilated, soft and patulous, so I delivered by podalic version, which was accomplished without any difficulty, carried ice into the uterus, vinegar, turpentine and hot water, continued my external manipulations but could not stimulate permanent contractions and retractions of the uterus Hemorrhage went on, and the woman died in about fifteen minutes after delivery The placenta came away with the child, and from the coagula which had formed upon it I should think it had been wholly detached. Hemorrhage was so severe in this case from the beginning, that death was unavoidable It was just about an hour from the time hemorrhage began until the woman was a corpse

Open hemorrhage is recognized without any difficulty, as the appearance of the blood is sufficient and makes the diagnosis Concealed hemorrhage is more difficult to diagnose The symptoms are obscure Pain is usually present, and severe in character Associated with it are the symptoms of acute anemia, and in severe cases even collapse, without any apparent cause The uterus is usually greatly distended Labor pains diminish or cease entirely This accident may be confounded with rupture of the uterus In rupture the uterus is smaller, and the fœtus may be felt in the abdominal cavity through the thin belly wall The presenting part recedes, if it is not wedged in the pelvis The rent may also be felt and sometimes prolapsed intestines

Placenta prævia is one of the causes of hemorrhage, but as it is a subject itself it would require too much time to discuss it in this paper Hemorrhage during or after the third stage of labor may be either primary or secondary If it occurs during or within twenty-four hours after the third stage of labor it is primary If at any time during the puerperal period thereafter, secondary It may come on immediately after the birth of the child, and before the expulsion of the placenta, or it may follow the delivery of the placenta Any circumstance, whether functional inactivity, organic defect, emotional disturbance or mechanical obstruction to a firm closure of the uterus, acts as a cause and invites hemorrhage The anatomical relation of the muscular fiber of the uterus to its vascular system is such that during tonic contractions and retractions of the uterus, the muscular fiber acts as a ligature to the arteries and sinuses which ramify its walls, and hemorrhage is impossible It is very important, in fact absolutely necessary, to be familiar with the cause or causes of this accident, because intelligent and skillful treatment is based upon the cause, and a successful termination of the case will depend upon one's ability to early recognize the cause and remove it Functional inactivity or uterine inertia, bears a casual relation to this complication The predisposing causes of uterine inertia are, hydramnios, twin pregnancies, constitutional weakness produced by some of the wasting diseases, insufficient food or bad hygienic environments, exhaustion from prolonged labor—any cause that so affects the constituents of the blood as to prevent the formation of thrombi, predisposes to hemorrhage, also, hemorrhage diathesis, rapid delivery and the employment of anæsthetics during parturition Hemorrhage during and after the third stage of labor is often caused by the retention within the uterus of the placenta, or parts of the placenta I do not think any obstetrician of to-day, skilled in the practice of his profession, with the gift from God of good common sense, would dare to leave the placenta as a whole in the uterus, although this practice at one time had its advocates, but it is not rare for parts of the placenta to be retained

The formation and retention of blood clots may also cause hemorrhage This is generally due to uterine relaxation, uterine displacements or the retention of some small pieces of the placenta around which the clot formed, which may be either the result of too forcible or premature efforts at expression or extraction, or abnormal placental adhesions, or some abnormality of the placenta, multiloba succenturia, etc., lacerations of the cervix uteri, which may extend so far as to sever the circular artery. Lacerations of the vagina, or of the perineum, or extreme soft parts, are sometimes the source of serious hemorrhage after firm contractions and retractions of the uterus, and a careful examination will reveal the true cause of the hemorrhage. These lacerations should be repaired at once, so it is necessary for an obstetrician to be a surgeon as well. Many previously healthy women are made invalids by not receiving proper attention from the attending physician.

Repair these lacerations immediately, and prevent the suffering which often accompanies them. Fibroid tumors sometimes cause hemorrhage by preventing firm contractions and retractions of the uterus. Varicose veins in and about the vulva are sometimes the source of hemorrhage. Carcinoma, either of the body of the uterus or cervix, may cause hemorrhage. Retarded involution, which is often due to some of the displacements, such as retroflexion, is the most frequent cause of secondary hemorrhage, although all the conditions which cause primary hemorrhage also cause secondary hemorrhage. We are glad to say that severe postpartum hemorrhage is generally a preventable accident by a skillful management of the third stage of labor. If every case were treated as a case of itself, and as though hemorrhage was impending, there would be very few accidents of this kind. The attention should be directed to securing tonic contractions and retractions of the uterus as a prophylactic. This is done by carefully following the uterus down with the hand when the child is expelled, also by making pressure over the fundus, and by external manipulations. If the uterus is soft and flabby, give some of the preparations of ergot, pref. ergotin, by hypodermic injection. Misrachi claims that caffein acts more readily than ergotin, especially if the patient has lost much blood.

If the patients are known to be bleeders, or to have had hemorrhage during previous confinements, they should be prepared for their parturition several weeks before it is expected to come on.

Dr. John M. Duff of Pittsburgh, is in the habit of giving such patients strychnia. He begins six weeks or two months before the expected time, administering $\frac{1}{60}$ to $\frac{1}{30}$ grains of the sulphate three times a day. Considering the physiological action of strychnia, we think this treatment rational and scientific. Bossi considers hydrastis canadensis a very useful remedy in the treatment of hemorrhage both during pregnancy and during and after parturition. He administers it to patients with a predisposition to flooding, and claims excellent results. In the treatment of accidental hemorrhage, we must strive to control the hemorrhage and also sustain the patient. If the os is dilated, it is good practice to deliver as soon as possible; if it is not, use the Barnes' dilators and proceed to deliver. Murray advocates plugging the vagina where the os is undilated. I do not think this good practice, because it will not prevent the hemorrhage, but will only prevent its escape from the vagina, and the woman may literally bleed to death in her own womb. When the uterus is empty, we have more control over it; it may then be packed with iodoform gauze, as recommended by Duhrssen. Hot water injected into the uterus acts very kindly sometimes. Ice introduced into the uterus, and turpentine or vinegar, often give very satisfactory results. If these fail we may resort to the application of styptics. Ergot should be administered either hypodermically or by the mouth. The patient must be sustained, so we resort to stimulants. Brandy, ammonia, ether, etc., should be administered hypodermically and by the mouth. Warmth should be applied. The patient's head should be lowered and if necessary the extremities may be bandaged from the distal end up. A successful termination of the case will depend on our ability to control the hemorrhage, and the recuperative powers of the woman. This treatment also applies to severe postpartum hemorrhage. If the hemorrhage after labor is due to retention within the organ of portions of the placenta or clots of blood, they should be removed at once.

Dirska's method of controlling postpartum hemorrhage is to press the fundus firmly with one hand, with the other remove all clots, and then introduce into the uterus and upper part of the vagina two or three small pieces of ice. The ice is left in place for a few minutes, and pressure kept up for a quarter of an hour longer. He believes this method to be extremely efficacious.

Kochs recommends a mode of treatment of postpartum hemorrhage, which is at least novel; that is to invert the uterus, and put an india rubber band around the neck of the inverted organ; after six hours the band is removed and the uterus replaced. If hemorrhage is due to a laceration of the cervix which severs the circular artery, the artery should be ligated and the laceration repaired; lacerations of the vagina, perineum and soft parts should be repaired if possible. Fibroid tumors, if they assume the shape of an intra-uterine polypus, should be removed by scissors, after ligature of their base. If they can not be removed, administer ergot, quinia, and apply the faradic current daily. When hemorrhage is due to carcinoma, plugging the vagina is good treatment. If the patient is suffering greatly from anemia, we can resort to transfusion of blood, or, which is just as beneficial, a 3 per cent. solution of common salt.

Dr. T. Ridgeway Barker of Philadelphia, took exception to the plan of treatment suggested for the control of puerperal hemorrhage. He was a firm believer in the methods mentioned a few years ago, until he had a severe case of postpartum hemorrhage which terminated in the death of the patient. He had learned from experience in this case that ice, hot water and ergot were entirely inefficient, and their use led to a waste of precious time. He recommends a tampon of antiseptic gauze. In slight hemorrhage the measures first mentioned would effect control. He thought the number of cases seen by the practitioner were in inverse ratio to his experience in midwifery.

Dr. E. P. Davis of Philadelphia, said if the uterus is held in one hand and tamponed with the other it is a physical impossibility for serious hemorrhage to occur. This is a comparatively modern procedure. In England they were again discussing compression of the abdominal aorta.

Dr. Morris of Wisconsin, had saved a case twenty years ago by compressing the abdominal aorta with the hand in the uterus, reinforced part of the time by the other hand pressing upon the uterus from without. Other cases were seen by him, and treated successfully in the same manner.

Dr William L Buechner of Youngstown, Ohio, finds that he is able to control cases of postpartum hemorrhage with hot water Formerly he resorted to cold water and ergot with unsatisfactory results Ergot judiciously administered in the second stage of labor controls hemorrhage, and he finds if he does not give it that clots form, and that later these clots give way and hemorrhage takes place

Dr E E Montgomery of Philadelphia, emphasized the advantage of using strychnia, not only prior to the delivery of women who are disposed to bleed, but subsequent to it with a view to arresting hemorrhage, to awaken the nerve centers and prevent the collapse that takes place by the loss of blood He said we have no drug at the present day so effective in its influence upon the heart's action and muscular coats of the vessels as that of strychnia He doubts the practical value of compression of the abdominal aorta, especially with the hand in the uterus, as part of the blood supply comes from the ovarian arteries, which arise high on the aorta

Dr Giles S Mitchell of Cincinnati, Ohio, laid stress upon the importance of prophylaxis of postpartum hemorrhage He believes that almost every case of postpartum hemorrhage can be prevented if the accoucheur pays proper attention to the third stage of labor He has had a tolerably large obstetric practice, and does not remember of ever seeing a case of postpartum hemorrhage He has seen one case of accidental hemorrhage from the premature detachment of the normally implanted placenta Fortunately the patient recovered

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THE ROUTINE PRACTICE OF ADMINISTERING ERGOT AFTER THE THIRD STAGE OF LABOR

Read before the Section of Obstetrics and Diseases of Women, at the Forty fourth Annual Meeting of the American Medical Association

BY T RIDGWAY BARKER, M D

PHILADELPHIA, PA

While the routine administration of any drug, one must admit, can scarcely be considered an indication of the highest degree of scientific knowledge yet, as the practice of medicine is not, and never can become, an exact science, since the personal equation always contains an unknown quantity, *vital resistance*, I think we may, without violation of current practice, adopt with advantage such a procedure

The old and apt proverb that an ounce of prevention is worth a pound of cure applies so forcibly to the employment of ergot after the termination of labor, in order to secure firm uterine muscular contractions and render them tonic, that this course would seem to be not only justifiable but actually indicated

Were it possible to prognosticate with any measure of certainty that Mrs A will suffer from uterine inertia with resultant hemorrhage, while Mrs B will not, then the opponents of this method would have some grounds on which to base their antagonism, but unfortunately for them, this foretelling the course of events has no foundation in fact and rests largely upon assumption, often not even reinforced by experience

I think I may declare, without fear of contradiction, that the occurrence of postpartum hemorrhage is due principally to a lack of correlation between uterine muscular contraction and coagulability of the blood, and while the latter, as I pointed out in a paper read before the Philadelphia Obstetrical Society in February, 1893, can readily be ascertained by noticing the tendency to clot formation by the blood escaping from the birth canal during the early stages of parturition, the other factor, (muscular contraction), must remain in doubt, since uterine exhaustion is liable to occur when least expected The realization of the above facts is absolutely necessary in order that one may follow out the arguments and results offered for consideration

Those who take exception to the routine practice of administering ergot, do not hesitate to say that it is suitable in most, if not all, cases of threatened postpartum hemorrhage, or where the uterus fails to contract promptly after the completion of the third stage of labor

This is undoubtedly sound reasoning, so far as it goes, but those on the affirmative side of the question say that it is not far enough

As I have endeavored to show, one can not tell when uterine inertia will occur, it may be within five minutes of the delivery of the fetus or it may be five hours Therefore, under such circumstances it is necessary in order to avoid this dangerous complication, that one resort to precautionary measures in every case 'Tis true, every woman who is confined, if properly attended does not suffer from postpartum hemorrhage, nor does the woman who is so afflicted necessarily die from its effects, yet it is too great a risk to run when nothing is to be gained thereby but rather a loss sustained, as I shall strive to prove

It has been said by some, who have given this method of administration a trial, that it "is neither necessary, expedient or devoid of danger" Further objection is offered that its routine use is liable to increase the parturient's discomfort by subjecting her to more severe and frequently recurring after pains

This is, in a measure, in accord with my observations, but I look upon after pains as synonymous with uterine contractions and while for the first few hours the discomfort as alluded to, is somewhat increased, I hold that this is more than balanced by the advantages which accrue from the immediate expulsion of all clots and dèbris from the uterine cavity, the more perfect and permanent closure of the uterine sinuses and the reduction in size of the placental site It is further claimed that there is danger in its administration from the fact that it may convert a simple hemorrhage into a concealed one and thereby increase the risk of sepsis Now just how it is possible for ergot to be guilty of such a thing I fail to comprehend

If the statement is based on the assumption that the drug is capable of causing complete stenosis of the cervical canal, I would ask for proof of a single case where such a condition could be so ascribed

In the first place, the effect of ergot is expended upon the whole layer of circular muscular fibers of the uterus, and not solely upon those in the immediate vicinity of the cervix

Besides the stimulating influence is not limited even to this layer but causes the longitudinal fibers, though to a less degree, to contract also Some have asserted that they noticed a rise in temperature follow the routine employment of this ecbolic

Such, however, has not been my experience, on the contrary,I have found the reverse to be the case, which I credit, not to any antipyretic effect inherent in the medicament, but to the more perfect retraction and depletion of the uterine vessels

That there exists great diversity of susceptibility to the action of ergot none will deny, but the variability would appear to be due in no slight degree to the strength of the preparation, and the time and method of administration

The above are some of the more general objections offered in evidence against this practice and yet, I can not but think they are more imaginary than real, since the routine method is being so generally adopted by some of the greatest clinicians and teachers in this country and Europe

Busey of Washington, D C, writing on the conduct of labor in "Hirst's System of Obstetrics," says "The routine administration of ergot at this stage of labor (after delivery of the placenta) is approved and practiced by many, if not a majority, of the most experienced and successful obstetricians, because it secures firm and persistent contraction of the uterus, lessens the danger of postpartum hemorrhage, protects in some measure the patient from septic complications, and promotes involution, whilst the dangers, if any, of producing hour-glass contraction of the uterus are too remote for consideration "

I therefore feel emboldened, when supported by such an authority and the results of my own personal experience, to declare myself in favor of this routine method, since by such means hemorrhage and its accompanying dangers are wellnigh impossible By the employment of ergot, in suitable doses, we place a trusty servant on guard to watch the uterus and see that it performs its duty, and should it be unequal to the task imposed upon it then this agent is at hand ready to lend assistance

Through its activity the uterus is reduced in size thereby lessening its encroachment upon the contents of the true and false pelvis Moreover, we can not fail to realize that by the closer crowding together and more perfect rearrangement of the muscular fibers the sinuses are practically obliterated, the thrombi smaller and the congestion of the organ relieved

Were the beneficial effects of ergot limited to the reduction in size of the placental site alone, it might well be considered a boon, for of all points within the cavity of the uterus this is the most vulnerable for the entrance of septic material since it is devoid of a protecting layer of epithelium

In this respect differing from the other portions of the cavity which recent researches go to prove is lined by an embryonic layer of epithelium which, while not attaining its full development until some weeks after separation of the decidua, yet serves a useful purpose as a protective against the entrance of pathogenic organisms

Accepting and appreciating this fact, one can not fail to realize the importance of reducing this denuded area to the minimum Though, as has been stated, the immediate discomfort of the parturient may be somewhat increased for a few hours, yet the subsequent annoyance from after pains is avoided, since the uterine cavity on the completion of labor is freed of all clots and dèbris which by their presence tend to excite muscular contractions

As to the danger attending the routine administration of ergot, I can not but think it is largely visionary, at least I have yet to meet with a single case though practicing this method for over two years, in which, in appropriate doses it has been productive of baneful effects, nor so far as I know, has any proof to the contrary been presented

Some of my opponents may claim that it is bad practice to interfere with nature when she is doing her work properly, and at first it would seem so, but when we consider that it is not *interference* but *assistance* that we render, the whole aspect of the case changes, and what appeared to be meddlesome midwifery proves really to be a judicious application of a scientific agent in the furtherance of a physiological process

The method of administration has, I believe, more to do with the rate of absorption and the degree of activity than is generally supposed Though at first I prescribed ergot in the form of fluid extract by the mouth in half drachm to drachm doses, I have of late discarded it, preferring one-quarter of a grain tablet triturates of ergotin, since their ingestion is free from the bad taste and stomachic irritation which always accompanies the fluid preparations

With regard to the hypodermic administration of ergot, I would say, that I have employed it in a considerable number of cases and found it to act promptly and efficiently, yet as the needle gives pain and its use is often objected to by the patient, without offering any additional benefit, I now but rarely have occasion to resort to the subcutaneous method

Where one has, however, to deal with a patient in a state of extreme exhaustion or collapse associated with or due to hemorrhage, this agent can not be relied upon since for its activity is required a more or less responsive nervous system This fact must be borne in mind, lest one postpone other and more efficient artificial measures for the control of hemorrhage until too late, when the rescue of the parturient becomes impossible

As to the oft discussed and disputed point that ergot assists and hastens involution, I wish to place myself on the affirmative side, believing as I must from clinical experience that it does facilitate fatty degeneration of the uterine muscular fibrillæ through its indirect influence upon the uterine blood vessels

It has been stated by my opponents that in the routine practice of administering ergot one can not know how large a dose to prescribe, my rule has been to order one quarter grain of ergotin in tablet triturate form, to be taken immediately after delivery of the placenta, and this dose to be doubled and repeated every half hour for the control of any excessive bleeding

In this way, I believe I have avoided the ingestion of any amount of the drug in excess of actual requirements The dose I am in the habit of employing may be said to be very minute, but I care not for its minuteness if it only does what is demanded of it

The object desired is not to drive nature to her work but to assist her should she fail One may very properly ask, how do you know that a dose of the size mentioned does benefit the parturient or even stimulate uterine contractions? To which I would reply, from the fact that shortly after its administration, uterine contractions are more frequent, lasting and complete, and by the prompt expulsion of all dèbris

In recommending the routine employment of this ecbolic it is not to be supposed that other measures are to be overlooked or neglected for the prevention of postpartum hemorrhage, just as much care should be exercised during every stage of the labor as under other circumstances The administration of ergot is not intended to correct bad and injudicious midwifery practice, but to aid and facilitate in the perfect restoration of the parturient to a physiological non-pregnant condition

To summarize, then, the advantages derived from the routine employment of ergot after labor, one I think, is justified in stating that, first, it insures the woman against possible uterine relaxation, second, it causes a reduction in the size of the uterus, which consequently encroaches less upon the pelvic viscera, third, the vessels in the uterine muscular walls are depleted and the force of the blood current reduced, fourth, it secures permanent closure of the uterine sinuses and allows the formation of firm clots at the mouths of the lacerated vessels, fifth, it reduces the area of the denuded placental site thereby lessening the danger of the entrance of septic matter into the circulation, sixth, it markedly diminishes the size of the uterine cavity with the resultant expulsion of all dèbris, seventh, it shortens the duration of after pains and renders the occurrence of fermentative changes within the cavity impossible, eighth, it hastens and facilitates the physiological processes incident to involution, ninth, the tablet triturate form of administration is to be preferred since it is rarely attended with nausea or vomiting, tenth, that it never does any harm in suitable doses and is always productive of good

Quite the contrary, I believe to be the case, and have so placed myself on record, when ergot is prescribed during any of the three stages of labor It is then a dangerous remedy and one likely to do far greater injury than any fancied good

For the above valid reasons I have adopted the routine practice of administering ergot after the third stage of labor and would recommend the same to those engaged in obstetric work as a valuable conservative measure

Dr Joseph Eastman of Indianapolis, Ind, said we must not forget that it is the law of all organs in the human body to have a period of life and a period of rest He objects to the routine use of ergot, because it substitutes tonic (unnatural) for clonic (natural) uterine contractions He is confident that he has seen cases of subinvolution of the uterus produced by the too persistent use of ergot He has seen cases where strychnia replaced ergot without interference with the normal clonic contructions of the uterus He has on previous occasions said, when speaking of the prevention of subinvolution of the uterus, that the use of ergot should be restricted to the third stage of labor He has gone even further and said that its use should be restricted to the satchel and not used at all, but this he thought was too extreme

Dr J A Murphy of Willkesbarre, Pa, finds that in cases where ergot fails to secure uterine contraction, mistletoe acts well

Dr John M Duff (the chairman), of Pittsburg, Pa, said he read a paper on the same subject last year in which he took an opposite view and argued against the routine use of ergot He thinks the routine practice of administering ergot after the third stage of labor is unscientific He administers it where he thinks it is indicated, and the obstetrician who is scientific and careful in his work will nearly always be able to tell in what cases it is indicated Those who have not tried strychnia in connection with cases in which they are afraid of hemorrhage, or in which there are severe after pains, will be agreeably surprised with the beneficial effects of it instead of ergot Nature should not be forced when she is doing her work normally

Dr C S Bacon of Chicago, said he had ceased the routine practice of administering ergot In several patients who were nursing children, he finds that its use has a perceptible effect in drying of the milk secretion, and his attention was called to the possible effect of it in the same way given immediately after labor Another objection was the uncertainty of its preparation

Dr Barker, in closing, said he had no doubt that if ergot were administered immediately after labor in the manner spoken of (large doses), it would give rise to the conditions named

THE ABUSE OF EMMET'S OPERATION FOR LACERATION OF THE CERVIX

Read in the Section of Obstetrics and Diseases of Women at the Forty-fourth Annual Meeting of the American Medical Association

BY E C DUDLEY, M D

CHICAGO

Emmet first operated for laceration of the cervix uteri in 1862 His published statement on the operation appeared in 1869 He published an elaborate paper on the subject in 1874,[1] and another in 1877[2] These papers were the outcome of many years' practical observation, not only of the operation itself, but of its relation to numerous pathological conditions, some of which the operation might cure, and others of which the abuse of the operation might cause

The original literature was characterized by conservatism, by completeness, by deliberation, it warranted, and subsequent results have justified, the prophesy of Marion-Sims, who said "We can't modify the operation, we can't change it, we can't improve, for it is perfect, perfect in its method, and perfect in its results Like all new operations it is likely to be abused, but the time will soon come when it will assume its place in the foremost rank of useful improvements" Notwithstanding the clearness with which the indications and contra indications, and the technique were defined, the operation, although no longer new, is often so badly executed as to be followed by most disappointing and sometimes by injurious results

We pass by with simple mention the abuse of the operation in cases unsuited to it, including those in which the laceration is slight, and not associated with uterine catarrh, cervical cystic degeneration, cervical erosion, cervical eversion We also exclude a large class of unfortunate cases, in which trachelorrhaphy is too often performed regardless of other and more important lesions, especially lesion of the uterine appendages and other peri-uterine structures.

The present discussion is confined to those failures following trachelorrhaphy, which are consequent upon faults connected with the execution of the operation itself, faults which often necessitate even the splitting apart of the united flaps, and doing the operation over again

The most common faults in the execution of trachelorrhaphy may be indicated as follows The operation may fail or do harm,

1 Because the operator has disregarded the presence of endometritis

2 Because the os externum has been closed so

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[1] American Journal of Obstetrics, Nov, 1874

[2] American Practitioner, January, 1877

tightly as to obstruct the free outflow of uterine secretions and menstrual fluid.

3. Because the cicatricial plugs in the angles of the laceration have not been removed.

4. Because diseased cervical glands have been rolled into the cervical canal where they find expression either in the form of cervical catarrh, or of retention cysts.

Endometritis, which complicates so many cervical lacerations may pertain specially to the vascular structures or to the glandular elements of the uterine mucosa, and may consequently give rise to menstrual disorders or to uterine catarrh or to both. Among menstrual disorders menorrhagia is most common. Granular endometritis furnishes a positive indication for forcible dilatation, curettement, irrigation, and the application of strong carbolic acid and iodin, all of which should immediately precede closure of the cervix, except in aggravated cases when the curettement should be followed by thorough and repeated uterine tamponade of gauze after the method popularized by Dr. Polk. This tamponade would postpone the suturing until after the cure of the endometritis. Undoubtedly all this may be successfully done after the trachelorrhaphy, and in exceptional cases such a course might be wise, but it would reverse the more natural order of things.

First, cure the catarrh, then close the cervix to clinch the cure. But why close the cervix at all, if the catarrh is cured? It is a principle in physiology that if irritation be applied to the outlet of a duct leading from a glandular system, the secretion of the glands will thereby become exaggerated and may become pathological, hence the closure of the cervix is now indicated, because it removes such a source of irritation. Since following this line of ractice my results have so much improved that I ow hesitate to close the cervix without at least an ploratory curettement which often brings away a urprising amount either of granulation or of other material having a similar appearance, whose presence had not been suspected.

The evil consequences of closing the os externum to such an extent as to obstruct the free drainage of uterine secretions and menstrual fluid, are familiar to all observers. The pathological anatomy observed after such operation is the natural outcome of the stenosis which is often so extreme as to exclude the finest probe, and sometime amounts to total atresia. The secretions accumulate, distend the uterus, and sometimes even the Fallopian tubes, the secretions become decomposed, induce endometritis, metritis, salpingitis. These inflammations may even extend still further with most disastrous results, or may only keep up such a chronic irritation and congestion in the pelvis, as often to reduce the victim to a state of helpless invalidism. The rapid and complete relief which often follows the restoration of the normal caliber of the cervical canal and os externum, proves that the uterine canal is a natural drainage tube, the integrity of which is essential to health. In such cases, however, dilatation, curettement and uterine tamponade, or some other method may be further indicated to overcome the endometritis induced by the long retention of irritating secretions. The simple enlargement of the os externum, however, by incision is not permanent in its results, because the structures involved are cicatricial, and therefore prone to recontract. A plastic operation, by which mucous membrane is made to cover the cut surfaces is imperative. Schroeder's operation fulfills the indication perfectly.

We may omit any extended consideration of Emmet's injunction for the removal of all cicatricial tissue from the angles of the wound, although this important step in the operation is often disregarded. However, failure to remove it commonly results in failure of union, or imperfect union, a fortunate compromise for the patient, since the cicatrix is much less injurious with the laceration open, than with the laceration closed. When, unfortunately, union has taken place, the train of nervous symptoms which follows often necessitates the removal of the cicatricial plugs and the reclosure of the wound.

The common forms of disease of the cervical glands, i. e., the nabothian glands of which Tyler Smith estimates the number to be 10,000 in the virgin cervix, often demand special attention, in connection with the closure of the laceration. One form is characterized by the excessive outpouring of the familiar gelatinous white-of-egg-like secretion which acts as a tenacious plug in the cervical canal, very difficult to dislodge and usually present in enormous quantities in the upper portion of the vagina.

When the cervix has been closed, after the classical method of Emmet, this secretion is apt to continue unabated, nor is the usual preparatory treatment of topical applications effective for the removal of the disease. Indeed, any treatment in this form of disease which does not include the removal of the offending glands themselves, usually fails. Three methods of destroying the diseased glands are practiced.

1. Strong cauterization.
2. The free use of the sharp curette.
3. Excision.

The first two methods, i. e., cauterization and sharp curettement, are objectionable for the following reasons. First, the glands are so deeply seated in the mucosa that they always escape the caustic and the curette, unless these have been used with such hardihood as to produce excessive cicatrization and consequent stenosis, a condition quite difficult to remedy, even by plastic surgery. The excision of the glands on the other hand, and the closure of the cervix by the method of Schroeder, removes the disease and leaves the organs in a physiological state. After this operation, the cut surfaces can not cicatrize and contract, because covered by mucous membrane, this having been united by means of sutures to the intra-cervical mucous membrane. Schroeder has also found this operation the only effective means of curing cervical catarrh, not only in cases of cervical laceration, but also in cases in which there has been no laceration. In the latter class of cases he makes bi-lateral incisions, and proceeds with the operation the same as in cases of laceration.

The other form of glandular disease of the cervix, is that known as cystic degeneration. The ducts of the nabothian follicles having become obliterated by adhesive inflammation, the follicles become distended by their own secretions, and form retention cysts. The great increase in the size of the lacerated cervix, both before and after trachelorrhaphy is often due to the presence of cystic degeneration of these follicles, a pathological condition which often becomes much exaggerated when any of these diseased glands have been rolled into the cervical canal by trachelorrhaphy Oftentimes the cysts are present in great numbers, and of such enormous size as to lead to the suspicion that the consequent enlargement of the cervix may be from malignant disease Such a case has recently come under my observation, the patient having suffered from pronounced catalepsy since trachelorrhaphy was performed ten years ago An examination showed atresia at the os externum, excessive enlargement of the cervix, right ovary partly fixed, size of English walnut, left ovary fixed, slightly enlarged In order to ascertain the true condition of the interior of the cervix deep bi-lateral incisions were made, and the anterior and posterior lips were spread wide apart as they are in the most extensive laceration Much pent up secretion escaped from the uterine cavity, showing that the tight closure of the os externum had converted that cavity into a retention cyst, large numbers of cysts of the nabothian follicles appeared in the cervix, some miliary, others as large as small marbles In the excision of these cysts, almost all the mucous membrane of the cervix was removed The margin of the mucous membrane of the vaginal portion was then stitched with catgut sutures to the margin of the intra-cervical mucous membrane, both anteriorly and posteriorly, so as to fold the anterior and posterior lips ot the cervix upon themselves The lateral incisions were then closed with silkworm gut sutures, leaving the cervical canal permanently patulous This operation was practically that of Schroeder The perineum which was lightly lacerated was also closed The operation was performed about six months ago, and the patient although naturally neurotic, reports herself free from cataleptiform seizures, since her recovery from the operation This case, although striking, is only one of a large and increasing number of parallel cases, which illustrate possible evil results of bad surgery

In the preparatory treatment for trachelorrhaphy, experience has shown that the simple puncturing of cysts of the nabothian follicles by means of the spear pointed lance is inadequate, because the cysts are prone to be refilled They should either be destroyed by the cautery or excised The excision may be of the individual cysts, provided they are not too numerous, otherwise of the cervical mucosa

The evil results consequent upon the abuse of Emmet's operation, are frequently encountered, and a large part of the most necessary work, in connection with this operation, at the present time, consists of the conservative surgical procedures already outlined, the object of which is to undo work which has already been done If the abuse of the operation has done much harm, the misguided practitioner must bear the burden of his own fault, the operation must not be made to do so for him

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LUNAR CAUSTIC—"You are worth a great deal more to people at some times than you are at others," said the comet sneeringly to the moon "That's why they call you the silver moon"

'Yes," replied the luminary, sadly, "it all comes of having to be taken at my phase value"—*Washington Star*

ORIGIN AND DEVELOPMENT OF THE GENITO-URINARY ORGANS IN WOMEN

Read in the Section of Obstetrics and Diseases of Women, at the Forty fourth Annual Meeting of the American Medical Association

BY F BYRON ROBINSON, B S, M D
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The following remarks are based on original investigation in the human and in the lower animals, especially the pig The research embraces the examination of about 1,000 specimens of the genitals of the human and lower animals in various conditions and stages of development The investigation was carried to the bird family, and some interesting information was gained The development of the genito-urinary organs is one of the most fascinating of all studies, as the plans of evolution are most perfectly manifested in rapid succession As the organs develop, the subjects of hypertrophy and atrophy are seen in their most typical forms It is plain that in the embryo whole ages of evolutionary development take place in a few weeks, and that each of the distinct stages of the then distinct kidneys of mammals represent so many wide periods of animal life The economy and conservatism of nature is shown in its most beautiful manner—in the development of the genito-urinary organs by inducing organs and ducts to act first for kidneys and excretory organs, and finally for egg channels and gestation sacs The great capacity that organs have to modify themselves is a most instructive subject Every young physician should acquaint himself with the embryological development of the part of anatomy to which his future practice is likely to lead Embryology aids in comprehending the history of the growth of the genitals It enables one to comprehend the adult genital organs and gives frequently a clue to their pathology The so-called practical man may attempt to announce that the study of the development of the genitals is worthless because we can not change the course of deficient nature But to the scientific physician every stage of the development of the genito-urinary organs is an incentive for hopeful acquisitions that may avert deformities Malformation of the female genitals is simply nature caught in the act of wrong development In the widespread awakening of the present it is interesting to observe the family physician attempting to study the female genitals so that he may understand arrest of development, relics of atrophied organs and tumors from the same To be practical one must follow every stage of developmental structure Comparative anatomy sheds a flood of light on such work, and if one will carefully investigate the growth of the Wolffian body among the lower animals and man, the adult form of the genito-urinary organs will be relatively easy of comprehension About 1750, Dr Wolff of Berlin, Germany, began to announce the results of his studies on the genito urinary bodies The subject was so attractive that it drew to it some of the most brilliant names of literature who have enriched our libraries Mueller, Gartner, Rosenmuller, Waldeyer, Lankester, Raztke and Gegenbaur are but a few who have recorded their views on the Wolffian body The magnificent labors of Balfour, which read like a bewitching story, aided by the industrious Semper, have enabled us to distinguish the three grand divisions of the Wolffian body The best and most practical method of obtaining clear knowledge of the Wolffian body is to secure fetal pigs at the slaughter house The development of the Wolffian body is similar in all mammals, and pigs can be obtained from a day old up to birth

The Wolffian body is a complex, varying organ extending from diaphragm to cloaca or rectum on each side of the backbone It is oval or spindle-shaped In a small fetus the Wolffian body is the longest visceral organ and almost fills the abdominal cavity The dominating fetal viscus is the liver, which rapidly enlarges and induces the large and prominent abdomen of early vertebral life so characteristic of infants As the liver enlarges the Wolffian bodies decrease, perhaps in accord with the view that only one viscus can induce a high blood supply Under a good lens one can easily see the longitudinal ducts of the Wolffian body, and also the very numerous short ducts that enter at right angles to the longitudinal ones In typical specimens the naked eye detects all this and much more I will note the study of the Wolffian body in three stages, as it occurs in nature

1 The first stage includes the head kidney and its duct or ureter It is called the first kidney or pronephros, and its duct is the Mullerian duct

2 The second stage is known as the middle kidney and its duct It is called mesonephros, and its duct is known as the Wolffian duct

3 The third stage is called the third kidney with its duct It is the kidney of adult life and its duct is the ureter of adult life

1 The head kidney or pronephros will not be given much attention, as it is not functionally in the higher vertebrates It may only be active in the fetal life of man for a few hours But in lower animals, as fishes, it functionates a whole fetal and adult life It is the duct of the pronephros which concerns us as gynecologists, for it finally forms the vagina, uterus and Fallopian tube The duct of the head kidney is known as Muller's duct It is the Fallopian tube It first carried urine from the head kidney, but it finally carried eggs Nature is so conservative that she makes one organ do several functions In the female, then, the duct of the first kidney carried urine and then eggs, while in the male it first carried urine and finally atrophies to a small cyst found on the testicle and known as the hydatid of Morgagni Muller's duct of each side comes together in its posterior or lower two thirds, and the approximated walls fuse so that one tube results The fusion of the two ducts begins about the center of the middle third and proceeds both forward and backward This peculiar method of fusion explains why we may have a single uterus and a double vagina, or a single vagina and a double uterus The manner of fusion explains why we may have no uterus and a double or single vagina, or a uterus and no vagina

The upper third of the Mullerian duct develops into the Fallopian tube At the upper or anterior end of Muller's duct we can find, in some 15 to 20 per cent of cases, a small pedunculated cyst known as the hydatid of Morgagni This hydatid of Morgagni is perhaps the drawn out end of the upper mouth of the duct of Muller, or it may be a dilated uriniferous tubule of the pronephros In the chicken the duct of Muller forms a single channel from ovary to cloaca, and the funnel-shaped abdominal end of the Fallopian tube opens out on the ovary, i e, the rich hen's ovary sits right in the funneled mouth of the tube In the hen, Muller's duct is merely a channel to discharge eggs, and it hardens or calcifies them as they pass the irregularly lumened and tortuous duct The Muller ducts in a chicken do not coalesce, so that it acts in the hen as a vagina, uterus and Fallopian tube while it is only one channel But the hen's duct is lined with peculiar epithelium, and secretes albumen to coat the egg and calcium salts to protect it with a shell while the egg passes the duct, which lasts from one to three days A hen has, curiously, only one Muller's duct and one ovary—the left The right has atrophied Dr LucyWaite reported to me that while investigating the genitals of hens, she found remnants of the right atrophied Muller's duct in the form of dilated cysts near the cloaca I had also found similar vestigial remains of the atrophied right Mullerian duct in hens At first I thought it was unique in birds to have one Muller's duct atrophied and only one duct and ovary functionating but on further investigation it was found that several of the lower species of animals had the same non-symmetry of ovary and Mullerian duct

The explanation of the bird's loss of the right ovary and ova duct is not yet given A very interesting subject was found in the varying upper or abdominal end of Muller's duct In the pig, Muller's duct ends in an enormously wide, fringed funnel. This large funnel opened into a spacious peritoneal pouch in which lies the pig's ovary In the ovulation of the sow the ova drop either, first, into this large peritoneal pouch and then into the funneled mouth of Muller's duct, or the ova drop directly into the mouth of the duct In either case when the sow ovulates it is hardly possible to lose any ova on account of the peritoneal pouch In animals with multiple births nature provides large means to secure rich supplies for reproduction through the peritoneal pouch and the peculiar ending of Muller's duct There is a peritoneal pouch in many animals —e g, cat, dog, mouse, pig—in which the fimbriated end of the Fallopian tube opens The pouch is peculiar in each animal The peritoneal pouch decreases in animals up to man There is a small trace of a peritoneal pouch in woman which I have several times observed In all animals which I have investigated — sheep, dog, bird, cow, monkey, cat, man, there is a band of muscular or ligamentous structure which connects the fimbriated end of Muller's duct to the ovary Ascending in the scale of animal life, we have, first, the eggs simply drop out of a hole in the peritoneum, second, the peritoneal pouch exists, third, the mouth of the duct surrounds the ovary, as in birds, and finally, the ligamentum ovaricum persists as it is in monkey and man This little strip of muscular tissue which connects the mouth of Muller's duct to the ovary, shortens at menstruation or oestrus in all animals which I have examined In shortening it draws the mouth of the duct over the surface of the ovary, and that part of the ovarian surface which is ovulating may emit an ovum into the duct's mouth, but if the ovulating surface of the ovary lies outside of the mouth of the duct, the ovum may be lost In the cow as well as in the living woman, I have seen the wide mouth of the tube cemented to the ovary at its circumference by sticky mucus at menstruation The disappearance of the peritoneal pouch is in direct ratio to the disappearance of multiple births The typical sample of the peritoneal pouch at the end of the tube is the pig, which has a typical multiple birth In man the peritoneal pouch at the tubal end is least, and typical single births characterize the genus homo So that multiple and single births have some relation to the connection of the ovary to the mouth of the tube Muller's duct varies widely in its form and coalescence from the lower animals to man In some the two ducts do not coalesce, e g, birds, in some they coalesce but a little, e g, pig, cow and horse, in monkey and man we note that Muller's ducts coalesce for their lower two-thirds, i e, up to the Fallopian tube

One very valuable landmark to distinguish the uterus from the Fallopian tube was given to us by the immortal Virchow, that is, the round ligament The round ligament inserts itself in the duct of Muller at the junction of the uterus and Fallopian tube This means that all gestation is done in that part of Muller's duct posterior to or below the insertion of the round ligament Gestation is never done in the Fallopian tube of animals but in the horns of the uterus In a long search I have never known an authenticated case of tubal pregnancy in any animal below man Only, so far, has it been demonstrated that in woman tubal pregnancy occurs It would appear that a monkey was just as liable to tubal pregnancy as woman, from the structure and shape of the genitals, but no proof is yet recorded of tubal pregnancy in monkeys It would be interesting to note the various kinds of placenta that the Muller duct bears, but space forbids Suffice it to say that in the carnivora it is zonular, i e, it reaches all around the circumference of the duct or gestation sac in the form of a band In the herbivora the placenta is cotyledonous, i e the placenta rests on peculiar elevations of the gestation sac, shaped just like a mushroom on its stalk In the omnivorous, e g, the pig, the placenta is universal, i e, the choroidal membrane lies close against the mucous membrane of Muller's duct or the gestation sac In the quadrumana, as in monkey and man, the placenta is discoidal, i e, the part of chorionic membrane which nourishes the child lies on the mucous membrane in the form of a disc Muller's duct acquires various kinds of epithelium for a lining through the animal kingdom Where the ducts coalesce into vagina, uterus and Fallopian tube as in most higher vertebrates there are generally three kinds of epithelium membrane, as, e g, squamous for the vagina, glandular, columnar and ciliated for the uterus, and glandular, columnar and ciliated for the Fallopian tube But whether the duct coalesces or not, a certain part of its epithelial lining possesses peculiar properties of secretory powers In the bird the endothelium can secrete albumen and calcium salts In mammals it possesses the power to gestate In general, the ova may be viewed as a gland and the Muller's tube as its duct

2 The second stage of the Wolffian body is known as the middle kidney or mesonephros Its duct is known as the segmental duct or Wolffian duct The Wolffian duct and the Mullerian duct appear to me to be formed side by side Others assert that the segmental duct splits into two and thus is formed Muller's and the Wolffian duct The middle kidney or mesonephros and its duct probably functionates in the human fetus for six weeks In the pig the mesonephros functionates for about one-half its fetal life The middle kidney is the Wolffian body, proper, of vertebrates and it grows to a very large size It consists of an elongated body lying on each side of the vertebral column and reaching from diaphragm to rectum or cloaca One can easily see its long white duct running from its anterior end to its posterior end where it empties into the cloaca At right angles to this long duct which collects the urine, may be seen dozens of short tubes running into the long tube The chief portion of the Wolffian body is composed of these small coiled tubes The duct of the Wolffian body first carries urine, finally it atrophies in woman and the functionless remnant is known as Gartner's duct In the male it is transformed from a urinal duct to a channel to carry semen—the vas deferens Nature is conservative and utilizes already formed structures for additional higher functions Another feature is demonstrated, in that the urinary organs and genital organs are very intimate in their development and growth For example, the kidneys, ovaries, tubes, uterus and vagina arise from the same Wolffian body, then their food, lymph and nerve supply must be absolutely connected This principle of same nerve supply is applicable all through adult life and can be observed in many diseases, i e, a diseased ovary will affect the kidney or a diseased tube will disturb a kidney, by reflex action through its circle of nerves

The middle kidney or mesonephros, is of the highest interest to the gynecologist, because he has to deal with its vestigial remnants In woman, the whole middle kidney atrophies and its residue is known as the parovarium The remnants of this kidney were discovered by Dr Rosenmuller in 1801 The name parovarium was given to it by Dr Kobelt.

The mesonephros has shrunk to a trapezoid shaped organ and lies in mesosalpynx, i e, between the ovary and Fallopian tube Its pointed or smaller end runs to the lumen of the ovary It is composed of from eight to thirty tubules which run in a vertical direction These tubes are the uriniferous tubules of the mesonephros The tubes all pursue a course at right angles to a longitudinal tube known as Gartner's duct—the original ureter of the mesonephros The parovarium consists of three quite distinct parts (*a*) Gartner's duct This runs toward the uterus and in cows it runs near the mouth of the urethra, occasionally It no doubt represents Skene's tubes In the pig it is often many feet long and as large as a clay pipestem It has a large lumen in the pig, and I have frequently noted its atrophy at different intervals of its course, so that it represents beads strung on a string It shows also interrupted atrophy in the woman I have several times, in laparotomy, seen Gartner's duct dilated, once to the size of a child's head, and again I saw it dilated as large as an apple and the dilatations were strung along like beads Perhaps each dilatation represented the entrance of a uriniferous tube

b The chief remnant of the mesonephros is the vertical tubules of the parovarium, varying from five to thirty, visible to the naked eye To see the tubules one should hold the broad ligament up to the light These little tubules frequently dilate into cysts from the size of pin heads up to that of a child's head The tubules have a lumen lined with epithelium

c The third structure found in the remnant of the atrophic mesonephros is that known as Keibel's tubes

These are flask-shaped cysts or dilated parts of the uriniferous tubules situated external to the vertical tubules They frequently dilate and gradually acquire a long, thin pedicle The reason of the existence of these blind, flask-shaped tubes of Keibel must be the same as that for the hydatid of Morgagni

d Besides these three distinct structures, we find other relics lying in the broad ligament in the form of isolated cysts lying under the peritoneum But they have definite locations, e g , some are nearly always found at the upper border of the abdominal tubal sphincter Another place is along the tubal fimbriæ which connect the tube to the ovary They are all remnants of the mesonephros The parovarium has pathological cysts in it in 60 per cent of women according to my examinations I have performed laparotomy for parovarian cysts on women from 23 years up to 55 years Parovarian cysts do not develop before puberty, but they may develop as long as the woman lives after puberty The repeated rupture and refilling of parovarian cysts I have noted in my own patients No peritonitis occurred Sows have parovarian cystic degeneration One distinguishes a parovarian cyst from other cysts by its capacity of being peeled out of the broad ligament

3 The third stage of the genito-urinary bodies is known as the metonephros or adult kidney Its duct is the ureter The last kidney grows out just behind the mesonephros It starts as a little white body, and soon grows to a large size It has at first a spiral, crooked ureter, but as the bladder sinks down into the pelvis it straightens out The atrophy of the middle kidney and the hypertrophy of the third is a fascinating subject The blood stream is simply turned from the middle kidney to the last kidney, the one shrinks and the other grows The mesonephros simply pales from lessening blood, the metonephros reddens from excess of blood The mesonephros atrophies and the metonephros hypertrophies just by changing the blood current It may be observed that the duct or ureter of the first kidney persists in woman as Muller's duct, making the vagina, uterus and tube In the male it is the duct or ureter of the second kidney that acts as the vas deferens and epididymis to carry semen

By slitting open the abdomen of fetal pigs in various stages one can observe the beginning and course of the ovary It arises from the internal sides of the Wolffian bodies as a white spot as large as the head of a pin It is very vascular and very glandular It grows rapidly from a kind of large, luxuriant epithelium heaped up into a ridge named the genital ridge It is highly supplied by nerves and lymphatics It does not manifest sex until the tenth week in the human, and acts similar in the lower animals One can tell sex by the external genitals far sooner than by the testicle or ovary The ovary soon after the first three months begins to manifest its Grafian follicles, and it is always seen to be a cystic organ It sinks down in the pelvis and its artery, the ovarian, stretches out and becomes very long in the upright animals The ovarian arteries arise from the aorta, just below the renal, at the original site of the growth of the ovaries The Wolffian body is held to the diaphragm by a strong ligamentous cord which may be called the diaphragmatic ligament The body is also fastened to the groin by a process which is surrounded by peritoneum like the ferrule on a fork handle This process of tissue becomes the round ligament, while the peritoneum which surrounds it becomes the canal of Nuck This process of round ligament formation with Nuck's canal can be observed to perfection in the growth of fetal pigs It may be observed that adult kidneys of many animals are lobulated, the reason of this is that the adult kidney arose first in a lobular or separate form Each lobule was fed by an artery, so that even in adult animals some kidneys may be found with several arteries The kidney of a human fetus I have seen lobulated but it soon gets smooth In man, dogs, pig, sheep, etc , the kidney is smooth, and in 75 per cent it is fed by one renal artery Among some fifty human cadavers which I have carefully dissected I found that 25 per cent of the kidneys had two to five arteries In the cow, one can see the typical lobulated kidney which must originally have had an artery for each lobule The Wolffian body was originally generally drained by one vein and that would be the renal vein But the upright position of man and monkey has induced the ovary to fall into the pelvis and this lengthened the ovarian vein This ovarian vein originally opened into the main vein which would be the renal At present the left ovarian vein opens at right angles into the renal vein and it represents the original fetal life But the right ovarian vein opens at present into the vena cava just below the renal vein Now the explanation I offer for this is that the evolutionary changes have occurred on the right side by the upright position, as then the ovary would drag on the ovarian vein and finally it would be apt to enter lower down in the long vena cava, while the left side still retains its original fetal condition Gegenbaur explains it in another way by saying that the left ovarian vein is a remnant of the cardinal vein, considerable disease is due to the difficulty of venous return on the left side The supra-renal bodies, which develop with the genito-urinary, lie in the still unknown field of physiology They have some relation with the sympathetic nerve whose significance is yet unknown

1 Out of the Wolffian body arise the uterus, vagina and Fallopian tube The ovary, parovarium, kidney and supra-renal bodies come from the same source Hence they all have a physiological and anatomical connection

2 The genital and urinary organs arise from the same source and occasionally one is modified to act for the other

3 Since the whole of the genital and urinary organs have both an anatomical and physiological relation, the essential knowledge for the gynecologist will lie in the nerve connections, for disturbance in one organ will disturb the balance of all

4 Injury to the nerves in one organ will disturb the circulation and nutrition in the other by reflex action

5 The peritoneum and genitals are anatomically and physiologically connected Hence disturbance in one will disturb the others

6 The chief nerve supply of the genitals and urinary apparatus is sympathetic

7 The main pathology of the sympathetic nerve is reflex action which will disturb any distant or adjacent viscus

8 The irritation in pregnancy passes up the hypogastric plexus to the abdominal brain and is reflected out on the renal plexus, inducing albumen in the urine The aching back in menstruation is accounted

for by the close nervous connection of genitals and urinary organs The renal plexus and the lateral ganglionic chain is dragged on by the hypogastric plexus

9 The nephritis and albumen in the urine after vaginal hysterectomy is due to the wounding of the hypozotic plexus and ovarian plexus, and the irritation is reflected into the renal plexus disturbing the kidney The shock from abdominal and vaginal section is due to the damage inflicted on the sympathetic plexus, and is often manifest in kidney disturbance

10 The intimate anatomical and physiological connection of the *genitals, kidneys and peritoneum* by nerve, blood and lymph supply invites dangers to one by wounding the other The danger of disturbed balance is brought about by reflex action flashed from one organ to another through a reflex arc

11 The anterior and posterior columns of the vagina represent the remnants at the points where the ducts of Muller coalesce, producing thick columns of tissue

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DOMESTIC CORRESPONDENCE

Does Tuberculin Scatter Tuberculosis?

AN OPEN LETTER TO DR HEATWOLE OF GOSHEN, IND , FROM DR DENISON OF DENVER, COL

Dear Doctor —The following are two extracts from the *Goshen Daily News* of Sept 4, which some one has kindly sent to me The cuttings are here transposed from their relative positions in the obituary notice, "A good citizen gone," so that the postmortem, which is what I wish to discuss, comes first

> "A POST MORTEM —This forenoon Dr Heatwole conducted an autopsy on the body of the late George N Thomas, assisted by Drs Bowser, Latta, Ash, Irwin Miller, Johnson and Whitmer It confirmed the diagnosis of the case, and revealed the fact that the Koch treatment had stopped the progress of the disease on the lungs, but had scattered it all over the glandular system, finally attacking the spine and brain which was the immediate cause of death
>
> ' The growth just under the knee proved to be a solid gland, five by seven inches, and had invaded the knee to such an extent as to entirely destroy the joint the ends of the bones at the knee joint having entirely disappeared
>
> "He had been a great sufferer for nearly three years, and especially so for the past few months, which he bore bravely and hopefully, although recovery was hopeless About seven years ago a growth like a tumor appeared on his leg just back of the knee caused by tuberculosis The growth increased gradually but not until about three years ago were his lungs affected Since that time he has traveled in climates which promised benefit, but improvement was only temporary While in Denver he took the Koch treatment and it apparently healed his lungs but the growth on his leg was constantly increasing in size until the leg became as large as his body and very painful A few days ago tubercular meningitis developed, becoming so severe on Saturday that he became unconscious that night, in which condition he remained until his death "

Prompted by a desire to do justice to a most useful remedy (tuberculin) I am persuaded to write you

For it has seemed to me that we ought to blame ourselves more and the remedy less, and then there would be hope of our becoming well acquainted with tuberculin and its modus operandi, as well as that of the disease it antagonizes, to use it intelligently and with good results The medical profession must be introspective and look to tuberculosis as well as to the composition of the remedy, for an explanation of the so called "failures" of tuberculin The delusion, which hinders a thorough understanding of the remedy, is that it inoculates with tuberculosis, or the above inference that it spreads the disease Whenever *insufficient diagnosis*, *unsuitable conditions* for a cure, and *excessive use* of tuberculin, such as obtained in the unfavorable results in the Johns Hopkins and the Pennsylvania hospitals,—whenever these conditions are behind the so called "failures" I feel like nailing the evidence where it belongs This is my reason for wishing to review this case of my former patient, (Nov 1892 to March 1893), to see if this dissemination of tuberculosis through the glandular system was subsequent to or followed the administration under my hands of Koch's tuberculin On this point it seems to me there are fairly three reasons why the stated conclusion of the autopsy is in error Of course I want to admit that this may be merely a *lapsus pennæ* of a newspaper reporter, but it expresses a popular prejudice and a false position taken by many physicians inexperienced with this new method of treatment, which position is not easy to combat with our insufficient knowledge of tuberculosis and tuberculin The three reasons are ,

1 The tumor in the popliteal space antedated the appearance of any lung lesion whatever by three years I deem it unnecessary to refer to the frequency with which tuberculosis originates in other parts before manifesting itself in the lungs Of course there may be a question raised as to the fact, but I am going to assume that the nature of this tumor, as stated in the account, was unique all the time from its beginning , i e , tuberculous, because under tuberculin treatment it grew hard and there was an effort to contract or shrink, and because the postmortem evidences showed that the most prolonged existence of tuberculosis was in the joint underneath the tumor I had my good friend Dr C Theodore Williams of London, when he was visiting us last November, see this patient When the doctor felt the tumor he exclaimed "Oh ! lymphadenoma, there is no question about it" All of which would go to show that tuberculosis was behind the lymphadenoma, and served to confirm in my own mind a theory I have had for some time, that *the bacillus of tubercle is not the beginning of tuberculosis* Instance our general inability to find the bacillus in glandular tumors known to be tuberculous by tuberculin reaction or otherwise, or in adenoid growths in the region of the third tonsil which I have known to be removed, as simply adenoid, from those who were steadily advancing in the tubercular process, as subsequent history proved

2 The implication of the glandular system antedated the use of tuberculin in this case, and may have been a resultant of la grippe two years previous I have known of other supposedly tuberculous subjects in whom the influenza seemed to center the tubercular poison in the glands of the neck In this case both the thyroid glands were becoming much enlarged, there were nodular glands above the clavicles and both breasts were tender and as large as a young maiden's

3 The reaction to tuberculin was not only in the affected lung, but in all these affected glands, especially in those above the clavicles, the breasts and in the tumor under the knee, showing that there was tubercular contamination there before tuberculin was given In the case of the tumor on the leg, the size of which was 7½ inches, measured lengthwise with the limb, and 10½ inches across the center, the effect of the treatment was a hardening of the soft mass and a restraint of its growth during the continuance of the tuberculin injections The pain caused there was a positive hindrance to the use of the larger doses of tuberculin This was the principal reason, probably, why Mr Thomas gave up the method at two different times although in all other respects the effect was quite favorable At one time he almost agreed to the proposition, which the autopsy now proves would probably have been best, namely, to amputate the limb and continue the immunity producing effect of tuberculin It was with a view of settling this question that Mr Thomas wished to consult with Dr Senn, and I was glad to have him do so, but of course did not expect Dr Senn to take my view of an operation with his expressed opposition to the use of tuberculin

I think I have made out my case that in this instance the scattering to the glands had occurred before the tuberculin

These are flask-shaped cysts or dilated parts of the uriniferous tubules situated external to the vertical tubules They frequently dilate and gradually acquire a long, thin pedicle The reason of the existence of these blind, flask-shaped tubes of Keibel must be the same as that for the hydatid of Morgagni

d Besides these three distinct structures, we find other relics lying in the broad ligament in the form of isolated cysts lying under the peritoneum But they have definite locations, e g , some are nearly always found at the upper border of the abdominal tubal sphincter Another place is along the tubal fimbriæ which connect the tube to the ovary They are all remnants of the mesonephros The parovarium has pathological cysts in it in 60 per cent of women according to my examinations I have performed laparotomy for parovarian cysts on women from 23 years up to 55 years Parovarian cysts do not develop before puberty, but they may develop as long as the woman lives after puberty The repeated rupture and refilling of parovarian cysts I have noted in my own patients No peritonitis occurred Sows have parovarian cystic degeneration One distinguishes a parovarian cyst from other cysts by its capacity of being peeled out of the broad ligament

3 The third stage of the genito-urinary bodies is known as the metonephros or adult kidney Its duct is the ureter The last kidney grows out just behind the mesonephros It starts as a little white body, and soon grows to a large size It has at first a spiral, crooked ureter, but as the bladder sinks down into the pelvis it straightens out The atrophy of the middle kidney and the hypertrophy of the third is a fascinating subject The blood stream is simply turned from the middle kidney to the last kidney, the one shrinks and the other grows The mesonephros simply pales from lessening blood, the metonephros reddens from excess of blood The mesonephros atrophies and the metonephros hypertrophies just by changing the blood current It may be observed that the duct or ureter of the first kidney persists in woman as Muller's duct, making the vagina, uterus and tube In the male it is the duct or ureter of the second kidney that acts as the vas deferens and epididymis to carry semen

By slitting open the abdomen of fetal pigs in various stages one can observe the beginning and course of the ovary It arises from the internal sides of the Wolffian bodies as a white spot as large as the head of a pin It is very vascular and very glandular It grows rapidly from a kind of large, luxuriant epithelium heaped up into a ridge named the genital ridge It is highly supplied by nerves and lymphatics It does not manifest sex until the tenth week in the human, and acts similar in the lower animals One can tell sex by the external genitals far sooner than by the testicle or ovary The ovary soon after the first three months begins to manifest its Grafian follicles, and it is always seen to be a cystic organ It sinks down in the pelvis and its artery, the ovarian, stretches out and becomes very long in the upright animals The ovarian arteries arise from the aorta, just below the renal, at the original site of the growth of the ovaries The Wolffian body is held to the diaphragm by a strong ligamentous cord which may be called the diaphragmatic ligament The body is also fastened to the groin by a process which is surrounded by peritoneum like the ferrule on a fork handle This process of tissue becomes the round ligament, while the peritoneum which surrounds it becomes the canal of Nuck This process of round ligament formation with Nuck's canal can be observed to perfection in the growth of fetal pigs It may be observed that adult kidneys of many animals are lobulated, the reason of this is that the adult kidney arose first in a lobular or separate form Each lobule was fed by an artery, so that even in adult animals some kidneys may be found with several arteries The kidney of a human fetus I have seen lobulated but it soon gets smooth In man, dogs, pig, sheep, etc , the kidney is smooth, and in 75 per cent it is fed by one renal artery Among some fifty human cadavers which I have carefully dissected I found that 25 per cent of the kidneys had two to five arteries In the cow, one can see the typical lobulated kidney which must originally have had an artery for each lobule The Wolffian body was originally generally drained by one vein and that would be the renal vein But the upright position of man and monkey has induced the ovary to fall into the pelvis and this lengthened the ovarian vein This ovarian vein originally opened into the main vein which would be the renal At present the left ovarian vein opens at right angles into the renal vein and it represents the original fetal life But the right ovarian vein opens at present into the vena cava just below the renal vein Now the explanation I offer for this is that the evolutionary changes have occurred on the right side by the upright position, as then the ovary would drag on the ovarian vein and finally it would be apt to enter lower down in the long vena cava, while the left side still retains its original fetal condition Gegenbaur explains it in another way by saying that the left ovarian vein is a remnant of the cardinal vein, considerable disease is due to the difficulty of venous return on the left side The supra-renal bodies, which develop with the genito-urinary, lie in the still unknown field of physiology They have some relation with the sympathetic nerve whose significance is yet unknown

1 Out of the Wolffian body arise the uterus, vagina and Fallopian tube The ovary, parovarium, kidney and supra-renal bodies come from the same source Hence they all have a physiological and anatomical connection

2 The genital and urinary organs arise from the same source and occasionally one is modified to act for the other

3 Since the whole of the genital and urinary organs have both an anatomical and physiological relation, the essential knowledge for the gynecologist will lie in the nerve connections, for disturbance in one organ will disturb the balance of all

4 Injury to the nerves in one organ will disturb the circulation and nutrition in the other by reflex action

5 The peritoneum and genitals are anatomically and physiologically connected Hence disturbance in one will disturb the others

6 The chief nerve supply of the genitals and urinary apparatus is sympathetic

7 The main pathology of the sympathetic nerve is reflex action which will disturb any distant or adjacent viscus

8 The irritation in pregnancy passes up the hypogastric plexus to the abdominal brain and is reflected out on the renal plexus, inducing albumen in the urine The aching back in menstruation is accounted

for by the close nervous connection of genitals and urinary organs The renal plexus and the lateral ganglionic chain is dragged on by the hypogastric plexus

9 The nephritis and albumen in the urine after vaginal hysterectomy is due to the wounding of the hypozotic plexus and ovarian plexus, and the irritation is reflected into the renal plexus disturbing the kidney The shock from abdominal and vaginal section is due to the damage inflicted on the sympathetic plexus, and is often manifest in kidney disturbance

10 The intimate anatomical and physiological connection of the *genitals, kidneys and peritoneum* by nerve, blood and lymph supply invites dangers to one by wounding the other The danger of disturbed balance is brought about by reflex action flashed from one organ to another through a reflex arc

11 The anterior and posterior columns of the vagina represent the remnants at the points where the ducts of Muller coalesce, producing thick columns of tissue

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DOMESTIC CORRESPONDENCE

Does Tuberculin Scatter Tuberculosis?

AN OPEN LETTER TO DR HEATWOLE OF GOSHEN, IND , FROM DR DENISON OF DENVER, COL

Dear Doctor —The following are two extracts from the *Goshen Daily News* of Sept 4, which some one has kindly sent to me The cuttings are here transposed from their relative positions in the obituary notice, "A good citizen gone," so that the postmortem, which is what I wish to discuss, comes first

> "A POST MORTEM —This forenoon Dr Heatwole conducted an autopsy on the body of the late George N Thomas, assisted by Drs Bowser, Latta, Ash, Irwin, Miller, Johnson and Whitmer It confirmed the diagnosis of the case, and revealed the fact that the Koch treatment had stopped the progress of the disease on the lungs, but had scattered it all over the glandular system, finally attacking the spine and brain which was the immediate cause of death
>
> ' The growth just under the knee proved to be a solid gland, five by seven inches, and had invaded the knee to such an extent as to entirely destroy the joint the ends of the bones at the knee joint having entirely disappeared
>
> ' He had been a great sufferer for nearly three years, and especially so for the past few months, which he bore bravely and hopefully, although recovery was hopeless About seven years ago a growth like a tumor appeared on his leg just back of the knee caused by tuberculosis The growth increased gradually but not until about three years ago were his lungs affected Since that time he has traveled in climates which promised benefit, but improvement was only temporary While in Denver he took the Koch treatment and it apparently healed his lungs but the growth on his leg was constantly increasing in size until the leg became as large as his body and very painful A few days ago tubercular meningitis developed, becoming so severe on Saturday that he became unconscious that night, in which condition he remained until his death "

Prompted by a desire to do justice to a most useful remedy (tuberculin) I am persuaded to write you

For it has seemed to me that we ought to blame ourselves more and the remedy less, and then there would be hope of our becoming well acquainted with tuberculin and its modus operandi, as well as that of the disease it antagonizes, to use it intelligently and with good results The medical profession must be introspective and look to tuberculosis as well as to the composition of the remedy, for an explanation of the so called "failures" of tuberculin The delusion, which hinders a thorough understanding of the remedy, is that it inoculates with tuberculosis, or the above inference that it spreads the disease Whenever *insufficient diagnosis, unsuitable conditions* for a cure, and *excessive use* of tuberculin, such as obtained in the unfavorable results in the Johns Hopkins and the Pennsylvania hospitals,—whenever these conditions are behind the so called "failures" I feel like nailing the evidence where it belongs This is my reason for wishing to review this case of my former patient, (Nov 1892 to March 1893), to see if this dissemination of tuberculosis through the glandular system was subsequent to or followed the administration under my hands of Koch's tuberculin. On this point it seems to me there are fairly three reasons why the stated conclusion of the autopsy is in error Of course I want to admit that this may be merely a *lapsus pennæ* of a newspaper reporter, but it expresses a popular prejudice and a false position taken by many physicians inexperienced with this new method of treatment, which position is not easy to combat with our insufficient knowledge of tuberculosis and tuberculin The three reasons are ,

1 The tumor in the popliteal space antedated the appearance of any lung lesion whatever by three years I deem it unnecessary to refer to the frequency with which tuberculosis originates in other parts before manifesting itself in the lungs Of course there may be a question raised as to the fact, but I am going to assume that the nature of this tumor, as stated in the account, was unique all the time from its beginning, i e , tuberculous, because under tuberculin treatment it grew hard and there was an effort to contract or shrink, and because the postmortem evidences showed that the most prolonged existence of tuberculosis was in the joint underneath the tumor I had my good friend Dr C Theodore Williams of London, when he was visiting us last November, see this patient When the doctor felt the tumor he exclaimed "Oh ! lymphadenoma, there is no question about it " All of which would go to show that tuberculosis was behind the lymphadenoma, and served to confirm in my own mind a theory I have had for some time, that *the bacillus of tubercle is not the beginning of tuberculosis* Instance our general inability to find the bacillus in glandular tumors known to be tuberculous by tuberculin reaction or otherwise, or in adenoid growths in the region of the third tonsil which I have known to be removed, as simply adenoid, from those who were steadily advancing in the tubercular process, as subsequent history proved

2 The implication of the glandular system antedated the use of tuberculin in this case, and may have been a resultant of la grippe two years previous I have known of other supposedly tuberculous subjects in whom the influenza seemed to center the tubercular poison in the glands of the neck In this case both the thyroid glands were becoming much enlarged, there were nodular glands above the clavicles and both breasts were tender and as large as a young maiden's

3 The reaction to tuberculin was not only in the affected lung, but in all these affected glands, especially in those above the clavicles, the breasts and in the tumor under the knee, showing that there was tubercular contamination there before tuberculin was given In the case of the tumor on the leg, the size of which was 7½ inches, measured lengthwise with the limb, and 10½ inches across the center, the effect of the treatment was a hardening of the soft mass and a restraint of its growth during the continuance of the tuberculin injections The pain caused there was a positive hindrance to the use of the larger doses of tuberculin This was the principal reason, probably, why Mr Thomas gave up the method at two different times although in all other respects the effect was quite favorable At one time he almost agreed to the proposition, which the autopsy now proves would probably have been best, namely, to amputate the limb and continue the immunity producing effect of tuberculin It was with a view of settling this question that Mr Thomas wished to consult with Dr Senn, and I was glad to have him do so, but of course did not expect Dr Senn to take my view of an operation with his expressed opposition to the use of tuberculin

I think I have made out my case that in this instance the scattering to the glands had occurred before the tuberculin treatment was commenced and therefore was not due to it

That the final breakup, which must come, of course, sooner or later, was through the climax in tubercular meningitis is not strange I have now seen nine cases where the lungs were more or less completely healed through climatic influence, and death came through tubercular meningitis, usually from some intercurrent exciting cause It is, perhaps, pertinent to this particular affection of a joint for me to add that the young lady who Mr Thomas will remember as coming to my office on crutches for tuberculin treatment, and who had had tubercular arthritis of both knee joints for about four years, so that she had not stepped on the floor for over two years, has so fully recovered that I hear of her in her Vermont home as walking to church even without a cane Other cases of glandular tubercular implication have done excellently well, but there is, of course, a necessity for a more persistent or prolonged course than when the glands are not affected, the same as with partially healed pulmonary cavities where the multiplication of tubercular bacilli is with difficulty prevented While I am on this subject of tuberculin, I wish to say here what I could not, when I wrote my paper a year and a half ago for the American Climatological Association, namely that I have found Kleb's Tuberculocidin to answer excellently well in some feverish, erethric and sensitive cases where the real tuberculin (Koch's) would be inadmissible It is about one-fortieth the strength of the latter and does not increase a previously existing fever as tuberculin does However, the descriptions of its preparation and directions for its use are criticised as not being very lucid I very much wish that some of our bacteriologists this side the Atlantic ocean would take hold of this matter and reasonably supply us with these useful preparations

Finally, Doctor, I wish to remind you that frequently disseminated tuberculosis, as several cases I have diagnosed by tuberculin injections would seem to show, does not manifest itself in the lungs until the system is profoundly under the influence of the disease Furthermore, the final dissemination to the glands, in most cases of tuberculosis ending in death, comes at that period when the individual vitality is lowered to the point where resistance is exhausted, and where it is unreasonable to conclude that any other agency scattered the tuberculosis to the glandular system Very respectfully yours,

CHARLES DENISON

Has Practiced Abroad, but does not Specify His College

To the Editor —As the JOURNAL is looked to abroad as the exponent of American medicine, is it not likely that foreign medical boards will think that our Association approves of inferior medical colleges, when some of the very worst in the United States are given constant advertising space in the JOURNAL, thus injuring all American diplomas? Having practiced for some years in a foreign country I know with what contempt the "Yankee" M D is held, and this is because of the shameful ignorance shown by most of our graduates who have left our shores seeking fame or fortune in foreign climes, and who, of course, were always from inferior colleges

Yours, etc ,

D C NEWMAN

Can Get All the Cerebrin He Wants

To the Editor —Dr G Archie Stockwell can get all the "cerebrin" made in May, 1893, he wants, and for nothing, provided he will, under the eyes of three physicians to be selected by the editor of the JOURNAL, repeat with it the experiments on himself which he alleges in the *Medical News* of Aug 26, he performed Satisfactory evidence will be given that the "cerebrin" is of the date mentioned

WILLIAM A HAMMOND

To Whom Credit is Due

To the Editor —In your issue of Sept 16, there appears a letter from Dr Hinde, in which he calls attention to a certain oversight in giving due credit for our joint report of a case "Periodically Recurring Oculo-motor Paralysis" The facts are that Dr Hinde first saw the case and credit is due him alone for having differentiated this rare condition The case was shown me and I subsequently made an exhaustive study of the bibliography which, with the notes of the case formed the first paper published in the *Medical Record* No one regrets more than myself the fact that Dr Hinde has not been credited with this interesting observation, and I now wish distinctly to state that I had nothing to do with the case further than that I examined it, studied the literature, and wrote the first paper

Dr Hinde says in closing that credit ought to be divided in this case I think not, as it belongs exclusively to him

Very truly yours,

HAROLD N MOYER

NECROLOGY

Dr W C Wardlaw, died in Atlanta, September 2 For many years Dr Wardlaw has been practicing his profession in Augusta, Ga He had been elected Dean of the Dental College at Atlanta, and had just moved to that city, preparatory to assuming his new duties

He was prepared for the South Carolina College, in the village school where he was graduated, and afterwards attended lectures at the Charleston Medical College, intending to make medicine his profession, but, the war coming on he was obliged to suspend his studies, and enlisted in the services of his State, and it was here that Dr Wardlaw displayed that endurance, courage and heroism which endeared him to his men, and called forth the commendation of his Commanding General and the compliments of his Colonel

He was desperately wounded during the war, and from the effects of that wound it was said he never recovered, and that his death was attributable to it

Returning from the war shattered in health and empty in purse he determined to adopt dentistry as his profession, a calling to which his great ingenuity and former knowledge of surgery well fitted him After practicing his profession in Abbeville for several years, subsequent to the war, he moved to Angusta, and rapidly rose to prominence in his profession

Dr Charles L Dayton, one of Buffalo's best known physicians, died Sept 7, at his residence on Dearborn street after an illness of about ten days Typhoid enteritis is said to have been the immediate cause of death Dr Dayton was born in the town of Eden, New York He was graduated from the Buffalo Medical college in 1854 and established a successful practice at Black Rock which continued for nearly forty years

He was a brother of Dr Lewis P Dayton, ex-mayor of Buffalo, and many years ago he held the position of health physician of Buffalo He was a member of the Erie County Medical society, and also of the Occidental lodge of Masons

Dr Robert Ferguson, at Anderson, Indiana, Sept 10

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS
Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No 68 WABASH AVE, CHICAGO, ILLINOIS
All members of the Association should send their Annual Dues to the Treasurer, RICHARD J DUNGLISON, M D, Lock Box 1271, Philadelphia, Pa

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SATURDAY, SEPTEMBER 23, 1893

THE NEED OF ORGANIZATION

The daily press are just now engaged in a crusade against our colleague, MR ERNEST HART, for his outspoken speeches against telepathy, theosophy, hypnotism Keeleyism and homeopathy It seems that whenever there is opportunity, the press generally take the side opposed to the professional view This fact can not well be controverted But it is scarcely fair to the press to accuse them, as MR HART has, of having a moneyed interest in charlatanry The truth is that the real fault lies with the medical profession itself The average State medical society scarcely contains ten per centum of the profession within the State The average legislator therefore hastily concludes that the medical society is the profession—that there are none outside except the irregulars, and he very naturally infers that the irregulars constitute a large proportion of the medical practitioners He thereupon passes laws giving representation on State boards of health and other bodies to all descriptions of medical heretics and charlatans If the medical profession will only organize by union with their local, State and National medical associations, they will show their real strength No politician can afford to ignore organizations controlling so many votes, and there can be no doubt but much of the official misrepresentation to which the profession has been subjected will cease when the eligible members of the profession unite

The effect upon the press of thorough organization would be no less striking than its effect upon the political class, and a timely intimation that the united medical profession had, by a duly constituted committee, investigated the subject of "———ism" and found it wanting, would put a brake on quack notoriety, except, perhaps, that embodied in paid advertisements, and even these may be suppressed later through the gradual enlightenment of public opinion A united medical profession can mold public opinion on all professional topics

These are among the reasons why organization is so desirable and so necessary That the medical men of this country are beginning to act upon this conviction, we have evidence in the steady increase of membership in the AMERICAN MEDICAL ASSOCIATION Forty-one new members were added last week and there were ten restorations to membership in the same week The increase in the membership, including those who joined at Milwaukee, for the three months ended August 31, is 351 We added this week one hundred and twenty copies to our mail list We sincerely hope that the good work may be actively pushed by every member of the ASSOCIATION, so long as any of the one hundred thousand physicians remain out of the fold Blank applications can always be furnished by the JOURNAL, and will be sent to any member who desires them in such quantities as he may wish

CHARAKA-SAMHITA

The oldest of the Hindu medical books known to be complete, the Charaka, is undergoing translation at the hands of the learned DR AVINASH CHANDRA KAVIRATNA The sixth fasciculus of the Charaka lies upon our table The difficulty about ancient Hindu literature is the absence of dates, the Hindu chronology being utterly fabulous

The laws of hygiene and of diet, however, have been studied by the Hindus from the earliest times The Ayur Veda, the "science of life," is the oldest of their books, and as was customary in all oriental mythology its origin is said to be divine, having been prepared by BRAHMA in the Satyar-yuga

WISE, in "History of Medicine Among the Asiatics," gives the following list of authors

AUTHOR'S NAME	NAME OF THE WORK	
	FOUND	SUPPOSED IRRECOVERABLE
Atrya	Atri Sangita	
Agnivesa Charaka	Charaka	
Bhila		Bhila Tantra
Jatukarna		Jatukarna Tantra
Parásara		Parásara Sangita
Harita	Harita Sangitá	
Kárpari		Kárpari Tantra
Dwonwantaree Susruta	Susruta	

These works are all compiled on the plan of the Ayur Veda

The Charaka is a system of oral instructions delivered by AGNIVEÇA (or AGNIBESA,) and commented upon by CHARAKA The work is compared to that of HIPPOCRATES, and WISE asserts as a strong probability that much of the Hippocratic knowledge was derived from the Hindu preexisting work

The origin of modern concours may be traced *in* the oriental mythology, which narrates that *once* upon a time, when the world was young, *the sages* were brought together to read their works on *medicine* for purposes of comparison and adoption *That of* the sage AGNIBESA received such approbation *that* "with a voice which reached to Heaven" the assembled sages proclaimed their admiration

Years rolled by, and Charaka corrected and revised the work of Agnibesa which then became the exponent of Brahminical medical lore

The directions translated in the present fasciculus for the construction of a hospital are interesting

> In the first place a mansion must be constructed under the supervision of an engineer well-conversant with the science of building mansions and houses It should be spacious and roomy The element of strength should not be wanting in it Every part of it should not be exposed to strong winds or breezes One portion at least should be open to the currents of wind [1]
>
> It should be such that one may move or walk through it with ease It should not be exposed to smoke, or the sun, or dust, or injurious sound and touch and taste and form and scent It should be furnished with staircases, with pestles and mortars, privies, accommodation for belting, and cook-rooms [2]
>
> After this, should be secured a body of attendants of good behaviour, distinguished for purity or cleanliness of habits, attached to the person for whose service they are engaged, possessed of cleverness and skill, endued with kindness, skilled in every kind of service that a patient may require, endued with general cleverness, competent to cook food and curries, clever in bathing or washing a patient, well conversant in rubbing or pressing the limbs,[2] or raising the patient or assisting him in walking or moving about, well-skilled in making or cleaning beds, competent to pound drugs, or ready, patient and skilful in waiting upon one that is ailing, and never unwilling to do any act that they may be commanded (by the physician or the patient) to do A number of men should also be secured that are skilled in vocal and instrumental music, in hymning encomiums and eulogies, conversant with and skilled in reciting verses and pleasant discourses and narratives and stories and legendary histories, clever in reading the face and understanding what is wanted by the patient, approved and liked by him upon whom they are to wait, fully conversant with all the requirements of time and place, and possessed of such politeness as to become agreeable companions The mansion should also be stored with an adequate supply of Lāva (*a*), Kapinjala (*b*), Caca (*c*), Harina (*d*), Ena (*e*), Kālapuchchhaka (*f*), Mrigamātrika (*g*) and Urabhra (*h*) [3]
>
> A cow also should be kept, yielding copious milk, of a quiet disposition, healthy, having all her calves living,[4] well tended with food and drink and kept in a fold that is properly cleaned So also should be kept little vessels or cups, larger vessels for washing the hands and face, water vessels or jars, small jars or pitchers, dishes, metallic or earthen jars, caldrons or pans, larger and smaller jars,[5] vessels called *kundas*, hollow vessels for covering articles, wooden or metallic ladles, mats, covers of cloth or blankets, vessels for boiling oils and ghee, churning rods, deerskins and sheepskins, rags, cloths made of cotton and wool, strings and chords, beds and seats, vessels called *Bhringáras* full of water and flatter vessels for holding spittle and evacuations, all placed ready for use, good beds placed upon bedsteads and overlaid with white sheets and containing pillows, for use when sleep is needed, beds and carpets for lying down or sitting upon, articles necessary for the operations of *Sneha*, *Sweda*, *Aiyanga* plasters, fomentation, rubbing vomiting, purging, application of oily or other kinds of enemata, errhines, urination and passing of stools, well washed mullers and flat stones that are smooth and rough and neither smooth nor rough, and diverse kinds of instruments, domestic and surgical Smoking tubes, enemas, and enemas of a special kind called *uttaravastikas* brushes and brooms, balances and weights, measuring vessels and baskets Ghee, oil, fat, marrow, honey, treacle, salt, fuel, water, honey-wines, sour gruels of different varieties, different kinds of wines, whey, butter-milk, sour gruel of paddy or rice, and the different varieties of animal urine, should also be kept ready

We have not space to give any more of this most learned and ancient production of the Hindus, at this time, but we can here only express our admiration, alike for the scholarship of Dr Avinash Kaviratna, and the industry which has produced the work, and as well the liberality of the publisher

CANNED VEGETABLES

The Chemical Division of the United States Department of Agriculture has just issued another part of its Report on Foods and Food Adulterants, technically known as Bulletin No 13 The present issue, Part VIII, deals with canned vegetables, especially with regard to methods of preserving, the preservatives employed, the character of the vessels used and the food value and digestibility of the articles A few words concerning this report may be of use, inasmuch as owing to the publicity given to it, medical practitioners may be questioned as to their views on the subject Tin and lead were found, derived from the cans and solder, copper from salts of the metal used for "greening" the vegetables, zinc in some samples of French goods, and sulphurous and particularly salicylic acid, employed for their antiseptic properties Boric and benzoic acids, saccharin and hydronaphthol were not found in any of the samples examined Tin is the most common metallic contamination, being present in every can that has been put up for any length of time Tin poisoning from the use of canned goods is not often alleged, although Hehner and other experimenters have found stannous hydrate to exercise a marked poisonous action on guinea pigs and other small animals Lead is freely used by the packers both in the solder and in low grade tin plate, but there is little danger of lead poisoning by the use of canned goods, for tin precipitates lead from its solutions and lead is not attacked by acids in the presence of as much tin as is found in the tin plate used There is more danger of lead poisoning from the sheet lead tops of glass jars than from the solder or lead of the tin cans The quantity of copper needful for "greening" amounts to only a quarter of a grain per pound, but much more than this quantity was often found The temperature required to destroy spores in vegetables tends to disintegrate many of them and render them less attractive in appearance, hence the use of salicylic acid Doses of one-half to one and a half grains of this acid have been given and taken daily by experimenters for periods of many months without affecting the system in any notable way Nevertheless its action on the kidneys is recognized, and in exceptional cases of renal disease its continued ingestion in the quantity present in canned goods may be harmful In dyspeptic cases, also, the antiseptic may do harm by interfering with the normal action of the digestive ferments

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[1] The meaning is that though protected against the breeze or strong winds one portion of the mansion should be exposed to the breeze —T

[2] Samvāhaka' is explained by the commentator as Hastapadādi sammarddaka —*T*

[3] *a* Perdix chinensis
b The francoline partridge
c The hare
d The common variety of the spotted deer
e The black antelope
f The black tailed deer
g A large species of deer fatter towards the abdominal and hinder parts
h Sheep

[4] If a cow loses a calf that is taken as an indication of ill health or of some disease —*T*

[5] These are all vessels of smaller or larger size for holding water They differ also in shapes

A trade journal criticises the report for conveying the impression that there is a widespread use of injurious antiseptics in injurious quantities, and points with emphasis to the fact that over one thousand million of cans are packed and consumed every year in this country alone and no well authenticated case of sickness has been traced to them, which could not with equal force be attributed to the use of similar articles not canned The chemists, however, do not intend to convey that impression nor to urge a prohibition of the use of copper salts and preservatives, but they claim the right on behalf of the people, of being informed by notice on the label of the can whether any ingredient foreign to the vegetable is present Packers should not be permitted to use these substances without notice plainly given of their presence and quantity, for the purchaser should be accorded the privilege of electing whether or not he will take the doses

AN APPEAL FOR PEACE AND TOLERANCE

The *Boston Medical and Surgical Journal*, August 24, gives prominent place to an article on "Sectarianism in Medicine" Four extra pages appear to have been added to that issue in order that the said article may be printed in its entirety The peculiarity of the article may be judged from the fact that the author thereof arrogates to himself and his party all the charity and good-will that lies in the possession of our fraternity, while applying to the standard bearers of rational medicine the most hateful of epithets, such as, "bigotry, intolerance, narrowness," also the adjectives, "pretentious and fraudulent" The writer would remodel all medical societies according to an "ideal" of his own conception, without the restraint of ironclad by-laws and codes of ethics, and without any wholesome knowledge whether any such societies have hitherto been tried and found wanting So far as our knowledge extends, the experiment has been tried once in this country, in the State of New York, but in no other country and no other State Ten years have gone by, and the organization which threw off the restraints of "bigotry and intolerance" remains about where it was when it started—less prominent, if anything can be judged of it from the outside, the assumption ten years ago, by its leaders, of all the better qualities of heart and mind has really done no harm and has converted nobody The old paths of rational medicine have not been destroyed, the ethically persuaded members of the profession are still intent upon their errands of mercy, and are ignorant of much that is said and written about their bigotry and narrowness of spirit The writer of the article mentioned above has our thanks for one paragraph, namely, that wherein he rejects the term "allopath" as applied to the rational branch of medical practice. He says "The impudence of those who would force medical men who do not believe in homeopathy as a general principle, and who refuse to place the slightest limitation upon their practice to accept the title, allopath, is colossal" The word "allopath," and others having the same etymological signification, should be uncompromisingly rejected by every member of the profession, not only as being non-descriptive, but, as conveying a false impression These terms are not used at the present time to the same extent as formerly, but we even now occasionally meet with them in situations where the audience has a right to expect a purer form of expression

In conclusion, let us remind the writer that the honorable sentiments of justice, fair play, and toleration are as certainly the characteristics of medical men as of any other body or class of men It is bad taste and poor diplomacy in one who bears a flag of truce and terms of capitulation to hurl abusive epithets at the heads of those who "hold the fort" Little efficacious work in the way of peace-making can be brought about in this manner

CLASSIFICATION OF CHEMICAL SALTS AND COMPOUNDS AS PREPARATIONS OF COAL TAR

The United States Circuit Court of Appeals affirmed May 17, 1893, the judgment of the Circuit Court, reversing the decision of the board of general appraisers in the cases of Roessler & Hasslacher Chemical Co and W J Matheson & Co, Limited, its decisions being now just reported in 56 *Federal Reporter*, pp 481, 482 It holds that the provisions of the tariff act of March 3, 1883, imposing a duty of 20 per cent on "all preparations of coal tar, not colors or dye," not specially provided for, applies to a product, the determining characteristic of which is something which it has received from coal tar, notwithstanding some of the constituents of coal tar have been eliminated, and other substances added, and that under this rule, napthionate of soda is dutiable as a preparation of coal tar, and not as a chemical salt, under the subsequent provision of the act, (22 Stat 494, Tariff Ind New, *par* 92) imposing a duty of 25 per cent "on all chemical compounds and salts," not specially provided for, while tolidine base and binitrotoluole are dutiable as preparations of coal tar, and not as chemical compounds, under the subsequent provision of the act

A GOOD BEGINNING —Dr Plummer, the chairman of the Committee of Arrangements at San Francisco, has begun his labors by sending in the names of nine new members by application This is one of the many evidences of the great movement now going on in building up the ASSOCIATION

PAN-AMERICAN EXCURSION

AT BOSTON

[From the Boston Herald]

The South Americans and all the other foreigners among the delegates of the Pan-American medical congress, recently held in Washington, who arrived in Boston Sept 12, had a gay time in their own way as the guests of Boston physicians

There are about sixty of the visiting physicians, and a good many of them are accompanied by their wives and families

Yesterday morning they visited the Massachusetts General Hospital, where they were carried from the Brunswick in three or four big transfer coaches

The Pan Americans looked like foreigners Most of them seemed not to understand more than the most commonly used English words and phrases, and Dr A Bustillo and Dr Julis Selva of the Harvard medical school, acted as official interpreters

The visitors went through the Massachusetts General Hospital under the escort of Supt Pratt Dr Pratt, in describing rooms or instruments or operations, spoke in English, and Mr Bustillo diffused his knowledge in the sweet toned Spanish tongue

The party were escorted to Boston by Dr Adams of Washington, and were met at the depot by Dr Selva and Dr Bustillo

Gen Ybarra met the delegation later to act as an escort Arthur P Cushing, Mexican consul, and his brother, Dr E W Cushing of Boston, were also at hand to do their part in entertaining

The visitors while here are the guests of the Massachusetts Medical Society, the committee of entertainment from which is composed of Dr J C White chairman, Dr H P Walcott, Dr S H Durgin, Dr A T Cabot, Dr E H Bradford, Dr J C Warren and Dr R H Fitz

After the party got a pretty fair idea of our hospital they were driven to the Harvard medical school They all gathered in the dean's room, on the first floor, where Dr J C White detailed the plan for inspection through Interpreter Bustillo

Two by two the Pan Americans went from the bacteriological exhibit room down stairs to the dissecting room on the top floor

Some found departments they liked, and made long stops, having everything explained

Shortly before 1 o'clock the ladies of the party arrived at the medical school They had been entertained by Gen Ybarra and Mr Cushing, the Mexican consul, and thoroughly enjoyed the drive about the city and suburbs

The ladies and children were mostly pronounced brunettes A few of them resembled the typical Brazilian maidens of the dark skinned, dark-haired types like the Misses Mendonca, daughters of the Brazilian minister in Washington during the last administration

At 1 o'clock all the delegates and their families sat down to lunch in the medical school

Wednesday, Sept 13, the program for the delegation was to visit the City Hospital from 9 30 to 12 30, and from 1 to 6, at the invitation of the Boston board of health, they visited the sanitary and quarantine stations in the harbor

In the morning the ladies were entertained by Dr E W Cushing at his private hospital in Roxbury, and visited with him the Woman's Charity Hospital Lunch was served at Dr Cushing's hospital, and then the ladies were taken by Dr Cushing to join the excursion down the harbor to the quarantine stations

The party was composed of the following

Dr V L Giles D M Hayti Dr Aug Corneau Hayti both relations of the dethroned King of Hayti Dr J E Monjaras professor of medical jurisprudence and general inspector of the Board of Health San Luis Potosi Mexico Dr Lagleyze, Buenos Ayres Argentine Republic Dr M Gutierrez, professor of obstetrics of the Medical School, Mexico City John Van Renssaeler Hoff major medical department United States Army Dr Angel Conteras professor of clinics Medical College, Pueblo Mexico Dr A M Fernandez y barra, assistant secretary general of the Pan American Congress New York P C Remondino editor of the *National Popular Review* Chicago Dr Manuel Carmona general director of the Medical College Mexico Dr Rogue Maconzet Mexico City Henry B Baker secretary State Board of Health, Lansing Dr E Liceaga president of the Board of Health, San Andres Mexico David Contreras, Mexico Dr G Vargus Paredes Bogota Colombia Dr J R Ycaza Mexico Ernest W Cushing editor of *Annals of Gynecology and Pædiatry* Boston Dr Enrique Lopez, Havana Cuba Dr Francisco Marin, Pueblo, Mexico Dr George C Ober Washington, D C Dr Alfredo Garces Popayan Colombia Dr Guan Mendieta, Buenos Ayres Argentine Republic Dr G Wythe Cooke, Washington, D C Dr George N Acker Washington D C Dr James G McShane, Baltimore Md John A Hopper, Washington D C Dr Lins E Ruiz Mexico City Dr Daniel Gutierrez Manezales Colombia Dr Juan J Ulloa San Jose, Costa Rica Dr Emilio, Echeverria Costa Rica Dr C H A Kleinschmidt, Washington D C Dr George H Rohé Catonsville, Md Dr G L Magruder Washington D C Mr De Pablo George E Ranning, Lansing Dr Antonio Jover Havana Cuba Dr Gregorio Mendizaval Mexico Dr J R Wolfe Glasgow, Scotland, Dr Ernest Hart, editor of the *British Medical Journal* C S Newbrier, Bay City

With the delegates are two or three Washington physicians and J E Jones, secretary of the National Capital Press Club, who represents the Washington *Evening Star* He is the only press representative traveling with the party

The party will leave Boston and stop at Saratoga, Niagara Falls, Detroit, Toledo, Cincinnati and Chicago

AT DETROIT

[From the Detroit Free Press, Sept 17]

The delegates to the Pan-American Medical Congress, which was held at Washington, arrived in the city yesterday morning before 7 o'clock The party, which numbered about sixty, were principally from Mexico, being accompanied by Samuel S Adams, chairman of the committee of arrangements, Dr H L E Johnson, chairman of the transportation committee They came by special train, which the United States Government has provided for the conveyance of the distinguished party from Washington to Chicago

At the depot they were met by the reception committee, composed as follows Dr E L Shurly, chairman, Drs A W Imrie, W G Henry, Hal C Wyman, E W Jenks, J Flinterman, A E Carrier, Donald Maclean, Leartus Connor, E A Chapoton, P J B Le Blanc, J V Becelaere, T A McGraw, H O Walker, F W Mann, C Henri Leonard, and Messrs M R Gatell, Herman Freund and F H Borradaile, and escorted to the Russell House where they sat down to breakfast

After a short rest the party were driven in carriages to the extensive laboratory of Frederick Stearns & Co, Twenty-first street, and were there received by Mr Stearns, Sr, who was awaiting their arrival

They visited twenty-four departments in the following order Mill room, fluid extract manufacturing, still room, fluid extract percolating room, fluid extract finishing room, pomade washers, pharmaceutical manufacturing, capsule room, stock room and analytical room, pill manufacturing room and gelatin coating room, sugar coating room, pill mass cutting room, Spanish office, pill finishing room, seidlitz room, pressroom, composing room, and compressed lozenge room, ointments, bottle washing room, filling room, filled stock room, packing and shipping room, cachet room and box factory, and stock room On the top of each of the doors to the different departments was a large printed card in Spanish describing the department, and the nature of the work performed there The doorways to the different departments were also decorated with the flags of the nations represented the Spanish colors being conspicuous

Special interest was manifested in the manufacture of hard and soft capsules and in the manufacture of pills The mechanical processes in use were entirely new to the strangers, and when they saw hundreds of pills turned out in a twinkling, as if by magic, and the gelatin of capsules formed, filled with the fluid and hermetically sealed in about the time it takes to swallow one, they could only utter their amazement They were impressed with the completeness of the lines of pharmaceutical products, with the magnitude of the establishment, its equipment, the system that was apparent everywhere and the scrupulous cleanliness of every department It took fully two hours to walk over the building after which the company were entertained at luncheon in the crude stock-storing room Time being limited, the refreshments had to be hurriedly partaken of They left about 12 o'clock

They also visited the great laboratories of Parke, Davis & Co and Nelson Baker & Co, where they were courteously received and hospitably entertained They were then driven round the city and to Belle Isle, and at 2 30 took luncheon at the Russell

In the evening they were entertained at a banquet at the Russell House The following day they were given a sail down the river, and left in the evening for Cincinnati

[Detroit Free Press, Sept 18]

AGROUND IN LAKE ST CLAIR —The visit of the delegates to the Pan-American Medical Congress came to an unpleasant ending last night and doubtless many wished they had omitted the last feature of the entertainment The delegates together with a number of local physicians and ladies took the steamer *Mary*, yesterday morning for a trip through the lake The party was entertained at the Oakland by Mark Hopkins but on the return trip the boat evidently lost her way, for she ran in too close to the Grosse Pointe shore and came to a standstill 300 feet from the club dock, running very hard aground All efforts to release her were without avail, and finally a boat was lowered and some of the local physicians went ashore to make arrangements for bringing the party back The street car company was apprised of the situation and sent out cars to convey the visitors to the Michigan Central depot, where their special awaited them It took some time to convey all in safety to the shore, and there was a great deal of consternation among the party while waiting for turns in the small boat The train was held and the delegates got away, although behind the scheduled time

AT CINCINNATI

[From the Commercial Gazette]

CINCINNATI, O , Sept 18, 1893

Mayor Mosby Monday morning received the representatives of the Pan-American Medical Congress There were about sixty in the body The delegates arrived in the morning in a special train, stopped at the Grand Hotel for breakfast, and made the City Hall their objective point They came in a tallyho and in carriages, and on alighting took possession of the Mayor's handsome reception room They had scarcely ensconced themselves in the heavy leather sofas and chairs when His Honor, arrayed in a new suit of black and a shining tile, stepped out of the private office Dr J C Culbertson, Chairman of the Reception Committee, Dr Comegys, President of the Academy of Medicine, the Health Officer and several other medical men, members of the Reception Committee, stood around ready to do honor to the distinguished visitors Dr Culbertson introduced the Mayor, who shook hands with each of the party, and then all adjourned to the handsome council chamber, where His Honor spoke as follows

"It is with a great deal of pleasure that I welcome the Pan-American Congress to our city I extend to you the warmest greeting of our citizens, and I want to thank you for your interest in studying our customs and laws Such interest is for our mutual benefit, and can not but help uniting the Americas in a firmer union As for your excursion, I feel and hope that commercial prosperity will follow it As for our hospitality, I wish to say that the city is yours If you see anything you want, take it, I will give you even our new City Hall "

The speech ended, the Congress took carriages to the City Hospital, where they went through the wards The College of Music was next visited, and President Peter Rudolph Neff had everything in good shape In the College proper all styles of classes were in recitation, and the Lyceum and Odeon had concerts In Music Hall the great organ was performed upon, and the only audience was the visitors Leaving the college, the visitors walked to Fourteenth street, where three electric cars awaited them These were run up Elm to the incline, and up that and on out to Burnet Woods, where the carriages, which had been sent on, took the members through the park and also through Clifton After a view had been taken of the handsome suburb a cut was made for the Zoological Gardens, where dinner was served

After dinner Avondale and Walnut Hills were driven through and then Eden Park and at the Art Museum a stop was made and a lunch served The Rookwood pottery was then examined, and a trip down the incline made Carriages were in waiting and conveyed the Queen City guests to the Grand, where after supper, the party took a special train for Chicago With the party was a colored man, Surgeon General for the Republic of Hayti Another (apparently colored) man was physician to the Khedive of Egypt, and a third, a handsome white man, was the medical adviser to the Emperor of Austria The two latter do not belong to the Congress, and joined the party accidentally in Washington

AT CHICAGO

The excursionists reached the Union depot, Chicago, on Tuesday, Sept 19 They were met at the depot by a committee consisting of Drs C W Earle, John B Hamilton, I N Danforth, Truman W Miller, Randolph N Hall, Cassius D Westcott, Frank C Greene and Geo Henry Cleveland This committee had arranged for the whole party at the Palmer House, but one of the Washington committees had arranged for breakfast for them at the Auditorium, but the *contretemps* was obviated by the party going in a body to the Auditorium for breakfast After breakfast they went to the banquet room, where they were formally welcomed by the Hon Carter H Harrison, Mayor of Chicago, who was introduced by Dr Chas W Earle, President of the Chicago Medical Society The Mayor made one of his characteristic speeches, which was well received

Dr Fernando Henrotin then bade the visitors welcome in French, Dr E J Gardner in Spanish, and Dr John B Hamilton in English Having been thus thrice welcomed, a brief response was made by one of the delegates, and the party was allowed to rest until evening

At 8 30 the hall and reception rooms of Kinsley's were thrown open, and the delegates were received by the General Committee of the Medical Society

The committee consisted among others of the following

Dr Chas W Earle, Dr John H Hollister, Dr Edmund J Doering, Dr Nicholas Senn Dr Archibald Church, Dr I N Danforth, Dr N S Davis Sr Dr John B Hamilton, Dr Truman W Miller, Dr D W Graham Dr J M Patton Dr R N Hall, Dr E J Gardner Dr L F Ingals Dr Edmund Andrews Dr Frank Johnson, Dr Frank Andrews, Dr Moreau R Brown Dr R N Isham Dr J B Murphy, Dr H Kellogg, Dr La Garde, U S A Dr C P Wertenbaker, M H S , Dr F C Greene Dr DeLaskie Miller Dr Wylis Andrews, Dr Frank Billings Dr H T Byford, Dr Sanger Brown, Dr G H Cleveland, Dr F C Hotz, Dr S H Stevenson, Dr Hoff, U S A , Dr Bayard Holmes Dr D R Brower, Dr J H Etheridge, Dr A R Reynolds Dr W E Clark, Dr E O Roler, Dr Ernest Hart and Sir Richard Webster

Many ladies attended the reception A male quartette sang funny songs, and a mandolin orchestra furnished instrumental music

On Wednesday the exercises began by a trip to the Chicago Medical College, where the new laboratory was inspected The party then visited the Cook County Hospital where luncheon was served, Dr J B Murphy presided There were some toasts, after which the Rush Medical, Physicians and Surgeons, Woman's, Policlinic and Post Graduate Medical Colleges were visited, and the Presbyterian Post Graduate and Policlinic Hospitals The day was finished at the Policlinic The visitors were escorted to their rooms at the Palmer House, and the great Pan-American Medical Congress had finished its program

MISCELLANY

Gift to a Hospital —St Luke's Hospital, Detroit, will receive $200,000 as a bequest from the late Samuel B Coyle of that city

Homeopathic College —The Louisville homeopathists have started a medical college in that city

Binghamton, N Y, hospital has been reopened, the city council having voted the money for its continuance

New Hospital at Winnipeg, Man —Winnipeg doctors are making strenuous efforts to have a general hospital established by the Dominion Government

West Chester Hospital —The managers of the West Chester county, Pa , Hospital have filed their application for the $10,000 voted them by the last legislature for the erection of a new building, with proviso that the management should first raise $5,000

Pennsylvania Hospital for Feeble Minded —The site for the State hospital for the care of feeble minded children has been selected near Franklin, Pa

Dr P O Hooper Resigns —Dr P O Hooper has resigned his position as superintendent of the Arkansas State Lunatic Asylum, the resignation to take effect some time within the next thirty or sixty days No reason is said to be given by the superintendent in his letter asking to be relieved of his charge The Arkansas Insane Asylum is the most important charity in the State

Dr Pozzi of Paris, the well known gynecologist, is on his way to Chicago, having been designated by the French Government to attend the World's Fair

Medical Society of the State of New York —The following business committee has been announced by the president of this Society, Dr Herman Bendell of Albany Dr Henry Flood of Elmira, Dr L Bolton Bangs of New York, Dr Edward Clark of Buffalo, to whom all communications regarding papers for the meeting of the society in February next may be addressed F C CURTIS, *Secretary*

Medical Club Election —At the first regular meeting of the Roswell Park Medical Club of Buffalo, the following officers were elected for the ensuing year president, Dr Julius H Potter, vice president, Dr George F Cott, secretary and treasurer, Dr James A Gibson Dr Potter read a paper on diphtheria and its latest treatment

A Hospital for Melrose, Mass —A charter has been issued from the office of the Secretary of State for the incorporation of the Melrose Hospital Association Royal P Barry is president of the new association, and Decius Beebe treasurer The hospital will be used for the needy sick and disabled of the town Those who are in a position to pay will be requested to do so Money so received will go to the maintenance of the hospital

Colorado Medical Library Association —DENVER, COL, Office of the Secretary, July, 1893 —The medical fraternity of Denver and Colorado are endeavoring, as the accompanying booklet shows, to build up a medical library in this city It is not necessary to call attention to the advantages which accrue to the profession of medicine through the establishment of a medical library Our remoteness from the centers of population makes the work we have undertaken difficult in many ways Your society can aid materially in this enterprise by sending us its proceedings Anything sent us will be acknowledged, placed on the shelves of the library and brought to the attention of its readers

Yours respectfully,
J T ESKRIDGE, M D, President,
HENRY SEWALL, M D, Secretary,
J C DANA, Librarian Public Library,
For the Association

Address, care Public Library, Denver, Col (The association will pay transportation if you wish)

The State Board of Health of Nebraska —The State Board of Health Sept 10 ruled against the issuing of certificates as physicians to graduates of Cotner University medical department, thus upholding the action of the board's secretary The board has passed this order "Your report in the matter of the medical college of Cotner University, together with other papers touching the same matter, having been under consideration of the State Board of Health, you are hereby notified that we affirm your decision and coincide with your conclusions that the number of clinics in connection with the college has not been sufficient to justify the recognition of its diplomas and we further recommend that as soon as this college has, in your judgment, complied with the requirements of the statutes its diplomas be recognized, and that all due encouragement be held out to this college to put itself upon a solid footing and to build up a strong medical institution

"It is understood that the college officers have secured a building near the main building and will open a hospital where patients may receive treatment free of charge A free dispensary is also to be opened in Lincoln, and by these additions the officers expect to satisfy the board that the law is being complied with"

Charity Hospital at Westchester, N Y —Although the Westchester Free Hospital has been open only a few days, hundreds of people have visited it, and each one has left a substantial donation Each afternoon finds it surrounded with a collection of swell turnouts and delivery carts Westchester has for the first time an institution on which people of all classes can unite, and a wave of charity has possession of the town

The secretary, William Hosea Ballou, announces the following medical board for the hospital year Consulting physicians, Dr Clement Cleveland, gynecologist, Dr J E Ellis, Dr Frank W Jackson and Dr W B James, consulting surgeons, Dr Joseph W Bissell, Dr Arnold Naudain and Dr Z E Lewis, out-patient department, Dr W C Deming, Dr Frank Anson Becker and Dr W B MacNichol, pathologist, Dr J S Thatcher

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from September 9, 1893, to September 15 1893

Major DAVID L HUNTINGTON, Surgeon U S A, is granted leave of absence for one month

Lieut Col CHARLES R GREENLEAF, deputy Surgeon General U S A, is granted leave of absence for two months, to take effect from August 25, 1893

Capt LOUIS A LA GARDE Asst Surgeon will upon the completion of his duties in connection with the World s Columbian Exposition, report in person to the commanding general, Dept of the Colorado, Denver, Col for duty as attending surgeon and examiner of recruits in that city

Lieut Col J V D MIDDLETON, deputy Surgeon General U S A, is hereby granted leave of absence for one month, to take effect on or about October 1, 1893, with permission to apply for an extension of fifteen days

First Lieut CHAMPE C MCCULLOCH Jr Asst Surgeon is relieved from duty at Ft Sam Houston Tex and ordered to Ft Ringgold, Tex for duty, relieving Capt JAMES E PILCHER, Asst Surgeon Capt PILCHER upon being relieved ordered to Ft Niagara N Y, for duty relieving Capt REUBEN L ROBERTSON Asst Surgeon Capt ROBERTSON upon being relieved, ordered to Ft Omaha, Neb for duty

Col J C BAILY, Asst Surgeon General is granted leave of absence for one month to take effect about the 5th instant

Major CHARLES L HEIZMANN Surgeon (Ft Douglas, Utah), is granted leave of absence for one month, to take effect between the 25th instant and the 5th proximo

Major J VAN R HOFF, Surgeon U S A, is hereby granted leave of absence for one month

First Lieut HENRY R STILES Asst Surgeon, is relieved from duty at Ft Omaha, Neb, and will report in person to the commanding officer, Ft Meade, S Dak for duty at that post

Capt CHARLES E WOODRUFF, Asst Surgeon leave of absence granted is extended four months By direction of the Secretary of War

Capt JUNIUS L POWELL Asst Surgeon, leave of absence granted is extended ten days

There are six vacancies in the Medical Corps of the Navy.

The Marine Hospital at Port Townsend was partially destroyed by fire on the 9th, at a loss of $3,500 The patients were removed to temporary quarters pending the construction of a new building

Marine Hospital Service —The importance of the work done by the Marine Hospital Service in keeping watch for cholera in Europe during this season has been undeniably great The latest reports received from its agents indicate that there is a good deal of the disease still on the continent in various places, while strenuous efforts are being put forth by the officials to conceal the facts Plainly this is no time for relaxation of efforts on the part of our quarantine and sanitary officers We have practically escaped cholera thus far, and we have learned much of value from last year s experience But unceasing vigilance alone can give us the assurance of continued safety —N Y *Tribune*

LETTERS RECEIVED

(**A**) Arend, A, Chicago, Ill Andrews H A, San Francisco Cal (**B**) Bates & Morse Adv Agency, New York, N Y, Bond, A K, Baltimore Md Bruce L N Excelsior Springs Mo Bates, X T Poughkeepsie, N Y Blakiston P Son & Co, Philadelphia Pa Bund Henry & Co, St Louis Mo, (**C**) Castle Wilmot Rochester, N Y Cutter, J A New York, N Y Crothers T D Hartford, Conn Crook, J A, Jackson Tenn Carroll, Jas, Pullman, Ill Chappell, J W Chicago (**D**) Dumesnil Ohmann St Louis Doughty, C L Cincinnati, O Douchy & Co, New York, N Y Davis L N Farmland, Ind, Dodd's Adv Agency, Boston Mass Dalton R H, St Louis, Donelson Chas P Chicago, Dean, H M, Muscatine Iowa (**E**) Eustis W C Owatonna, Minn (**F**) Ferguson, A H, Winnipeg Manitoba, Forbes Diastase Co Cincinnati O, (**G**) Griffin, C F San Francisco Cal Gamble W E, Chicago (**H**) Holmes G R Avondale Ohio Hayes, C W, Washington D C Hinton, J A, Friendship Tenn, Holtgrewe, F L St Louis, Mo (**K**) Kengla, L A, San Francisco, Cal Kurtz C E, Chicago (**L**) Lewis, C H, Oakland Cal Lippincott J R, Company, Philadelphia, Pa Landon, Wm, Columbus Ill Lippman Bros, Savannah, Ga LaGarde, L A, Chicago (**M**) Malted Milk Co, Racine Wis, McMurtry, L S, Louisville Merrill J C, U S A, Washington, D C McArthur Hypophosphite Co Ansonia Conn McDonell J L, Detroit, Mich Miller, R E, Napa, Cal McEnroe J F, Schenectady, N Y (**N**) New York Phar Ass n Yonkers, N Y Novelty Manufacturing Co Los Angeles, Cal, (**O**) Opie Thomas Baltimore, Md (**P**) Parke, Davis & Co, Detroit Mich Poppe, H B B Scandinavia Wis, Preston, W T R, Toronto, Canada (**R**) Renz & Henry, Louisville, Ky Rio Chemical Co, St Louis, Mo Rauch, Jno H Lebanon Pa (**S**) Stearns F & Co, Detroit, Mich Sayre R H New York, (**T**) Tuttle H C Rutland, Vt Tracy, W J Norwalk Conn Taylor Jas L, Wheelersburg Ohio Topliff s Botanic Laboratory New York, N Y Traverse A W Milwaukee, Wis Taylor Henry L New York (**V**) Volding M N Independence, Iowa (**W**) Widman, J F, McGregor Iowa Whitney, E E, Hillsdale, Mich Westgate, J C Detroit Mich Weeks & Potter Co Boston Mass, Wooton W S Blue Island, Ill Warner, W R, Philadelphia, Pa (**Y**) Young, E S, Edgewater, Va

The Journal of the
American Medical Association

VOL XXI CHICAGO, SEPTEMBER 30, 1893 No 14

ORIGINAL ARTICLES

AMERICAN INEBRIATE ASYLUMS

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY T D CROTHERS, M D
SUPERINTENDENT WALNUT LODGE HOSPITAL, ETC, ETC
HARTFORD, CONN

Institutional care and treatment of inebriates began first in this country, and up to this time has attained a degree of development and prominence greater than that of any other country of the world There are in Great Britain over forty asylums where inebriates are received and treated, and at least ten or twelve more in Europe, three are in India, two in Australia and New Zealand, and two opium hospitals are in operation in China With the asylums in this country, the number will reach to about one hundred and twenty in the world It is difficult to ascertain the exact number for the reason that many of these asylums are irregular in their work, and are associated with reformatories, sanatariums and homes for mental diseases

In Europe they are often sectarian church homes, and in this country many are private enterprises, dependent on the caprice of the managers and their successes This is incident to every new work, and the formative stage, or the period of credulity that is always followed by the age of reason

Asylum care of inebriates implies a recognition of disease and curability, which has been mentioned and urged for over two thousand years of the world's history From the time of Hippocrates (and even before), down to the beginning of this century, the idea of drink madness and drink excesses being a disease, and curable by physical means, with restraint, has appeared in the science and literature of every age Dr Rush's writings in 1790 and 1809, seemed to have formulated the vague ideas along this line, although several European authorities carried the subject farther on they were practically unknown in this country, hence Dr Rush may be said to have given the first inspiration and practical direction to the doctrine of the disease and its curability

This idea was repeated in various ways, over and over again, until finally in 1846, Dr J E Turner appeared as the first pioneer to build an asylum and demonstrate this fact

Although the disease of inebriety had been recognized by a large number of eminent men in both this country and Europe, and asylums for their cure had been urged by the Connecticut State Medical Society of 1830, and the English Lunacy Commission of 1844, and others, the opposition of moralists and clerical reformers was so bitter and intense as to prevent any practical work This has continued up to the present, only growing less and less

In the year 1846, Dr J E Turner of Bath, Maine, a practicing physician, became interested in the need of an asylum, from an ineffectual effort to save an early friend who was an inebriate

He recognized the nature of the disease of inebriety and the need of hospital treatment and began an enthusiastic agitation of the subject

He began by petitions and solicitations for money and influence to build an asylum, appealing to the New York State Legislature for years before a mere recognition was given So intense was the opposition that clergymen denounced it from the pulpit, and many of the religious and secular papers condemned the theory of disease and idea of an asylum as insane and opposed by all common sense and judgment

At this distance, this period of denial and persecution appears like a glimpse of the dark ages, and the medieval spirit that opposed every new truth of science

Finally, after ten years of persistent effort, despite the most bitter opposition he succeeded in forming a company to build an inebriate hospital, with the late famous surgeon, Dr Valentine Mott, as president

In May 15, 1854, the first inebriate asylum in the world was chartered by the New York State Legislature Laws were passed giving power to hold inmates and charter was granted The city of Binghamton bought a farm of nearly 200 acres of land and gave it to this company Donations of lumber, stone and all kinds of building material were made on solicitation The corner stone was laid in 1858, of what was later a magnificent building, and at one time the finest type of castellated Gothic architecture in the world Six years later a part of the building was completed and opened for patients

The founder, Dr Turner, was a man of indomitable perseverance and tireless energy, who worked on without aid from others, begging money and material and superintending the construction of all the details of the building At length in 1864, this first asylum of the world was opened for the physical care and treatment of inebriates at Binghamton, N Y The principles of treatment on which it was established were simply remarkable in clear, defined, scientific conceptions of the nature and requirements of such cases Absolute restraint and control was provided, and no one was received for less than one year It asked no pledges or promises from the patient, it aimed to give each one positive protection and medical treatment The patients were locked in at night and only allowed out for exercise under the strict care of attendants Turkish baths were given twice a week, work rooms were provided for those of mechanical tastes Amusements of base ball, billiards, bowling and carriage drives were urged each day Each case was considered a suicidal case

Dr Pozzi of Paris the well known gynecologist, is on his way to Chicago, having been designated by the French Government to attend the World's Fair

Medical Society of the State of New York —The following business committee has been announced by the president of this Society, Dr Herman Bendell of Albany Dr Henry Flood of Elmira, Dr L Bolton Bangs of New York, Dr Edward Clark of Buffalo, to whom all communications regarding papers for the meeting of the society in February next may be addressed F C Curtis, *Secretary*

Medical Club Election —At the first regular meeting of the Roswell Park Medical Club of Buffalo, the following officers were elected for the ensuing year president, Dr Julius H Potter, vice president, Dr George F Cott, secretary and treasurer, Dr James A Gibson Dr Potter read a paper on diphtheria and its latest treatment

A Hospital for Melrose, Mass —A charter has been issued from the office of the Secretary of State for the incorporation of the Melrose Hospital Association Royal P Barry is president of the new association, and Decius Beebe treasurer The hospital will be used for the needy sick and disabled of the town Those who are in a position to pay will be requested to do so Money so received will go to the maintenance of the hospital

Colorado Medical Library Association —Denver, Col, Office of the Secretary, July, 1893 —The medical fraternity of Denver and Colorado are endeavoring, as the accompanying booklet shows, to build up a medical library in this city It is not necessary to call attention to the advantages which accrue to the profession of medicine through the establishment of a medical library Our remoteness from the centers of population makes the work we have undertaken difficult in many ways Your society can aid materially in this enterprise by sending us its proceedings Anything sent us will be acknowledged, placed on the shelves of the library and brought to the attention of its readers

Yours respectfully,
J T Eskridge, M D, President,
Henry Sewall, M D, Secretary,
J C Dana, Librarian Public Library,
For the Association

Address, care Public Library, Denver, Col (The association will pay transportation if you wish)

The State Board of Health of Nebraska —The State Board of Health Sept 10 ruled against the issuing of certificates as physicians to graduates of Cotner University medical department, thus upholding the action of the board's secretary The board has passed this order "Your report in the matter of the medical college of Cotner University, together with other papers touching the same matter, having been under consideration of the State Board of Health, you are hereby notified that we affirm your decision and coincide with your conclusions that the number of clinics in connection with the college has not been sufficient to justify the recognition of its diplomas, and we further recommend that as soon as this college has, in your judgment, complied with the requirements of the statutes its diplomas be recognized, and that all due encouragement be held out to this college to put itself upon a solid footing and to build up a strong medical institution

"It is understood that the college officers have secured a building near the main building and will open a hospital where patients may receive treatment free of charge A free dispensary is also to be opened in Lincoln, and by these additions the officers expect to satisfy the board that the law is being complied with "

Charity Hospital at Westchester, N Y —Although the Westchester Free Hospital has been open only a few days, hundreds of people have visited it, and each one has left a substantial donation Each afternoon finds it surrounded with a collection of swell turnouts and delivery carts Westchester has for the first time an institution on which people of all classes can unite, and a wave of charity has possession of the town

The secretary, William Hosea Ballou, announces the following medical board for the hospital year Consulting physicians, Dr Clement Cleveland, gynecologist, Dr J E Ellis, Dr Frank W Jackson and Dr W B James, consulting surgeons, Dr Joseph W Bissell, Dr Arnold Naudain and Dr Z E Lewis, out-patient department, Dr W C Deming, Dr Frank Anson Becker and Dr W B MacNichol, pathologist, Dr J S Thatcher

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THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from September 9, 1893 to September 15 1893

Major David L Huntington, Surgeon U S A, is granted leave of absence for one month

Lieut Col Charles R Greenleaf, deputy Surgeon General U S A, is granted leave of absence for two months, to take effect from August 25, 1893

Capt Louis A La Garde, Asst Surgeon will upon the completion of his duties in connection with the World s Columbian Exposition report in person to the commanding general, Dept of the Colorado, Denver, Col for duty as attending surgeon and examiner of recruits in that city

Lieut Col J V D Middleton, deputy Surgeon General U S A, is hereby granted leave of absence for one month, to take effect on or about October 1, 1893, with permission to apply for an extension of fifteen days

First Lieut Champe C McCulloch Jr Asst Surgeon is relieved from duty at Ft Sam Houston, Tex and ordered to Ft Ringgold, Tex, for duty, relieving Capt James E Pilcher, Asst Surgeon Capt Pilcher, upon being relieved ordered to Ft Niagara N Y, for duty, relieving Capt Reuben L Robertson Asst Surgeon Capt Robertson upon being relieved ordered to Ft Omaha Neb for duty

Col J C Baily, Asst Surgeon General is granted leave of absence for one month to take effect about the 5th instant

Major Charles L Heizmann Surgeon (Ft Douglas, Utah), is granted leave of absence for one month to take effect between the 25th instant and the 5th proximo

Major J Van R Hoff, Surgeon U S A, is hereby granted leave of absence for one month

First Lieut Henry R Stiles Asst Surgeon, is relieved from duty at Ft Omaha, Neb, and will report in person to the commanding officer, Ft Meade, S Dak for duty at that post

Capt Charles E Woodruff, Asst Surgeon leave of absence granted is extended four months By direction of the Secretary of War

Capt Junius L Powell Asst Surgeon, leave of absence granted is extended ten days

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There are six vacancies in the Medical Corps of the Navy.

The Marine Hospital at Port Townsend was partially destroyed by fire on the 9th at a loss of $3,500 The patients were removed to temporary quarters pending the construction of a new building

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Marine Hospital Service —The importance of the work done by the Marine Hospital Service in keeping watch for cholera in Europe during this season has been undeniably great The latest reports received from its agents indicate that there is a good deal of the disease still on the continent in various places, while strenuous efforts are being put forth by the officials to conceal the facts Plainly this is no time for relaxation of efforts on the part of our quarantine and sanitary officers We have practically escaped cholera thus far, and we have learned much of value from last year's experience But unceasing vigilance alone can give us the assurance of continued safety —*N Y Tribune*

LETTERS RECEIVED

(**A**) Arend A, Chicago, Ill Andrews, H A, San Francisco Cal (**B**) Bates & Morse, Adv Agency New York, N Y, Bond, A K, Baltimore Md Bruce L N Excelsior Springs Mo Bates, X T Poughkeepsie N Y Blakiston P Son & Co Philadelphia Pa Bund Henry & Co, St Louis, Mo (**C**) Castle Wilmot, Rochester, N Y Cutter, J A New York N Y Crothers T D Hartford, Conn Crook, J A, Jackson, Tenn Carroll, Jas Pullman, Ill Chappell, J W Chicago, (**D**) Dumesnil Ohmann St Louis Doughty, C L Cincinnati, O Douchy & Co, New York, N Y Davis, L N Farmland, Ind, Dodd's Adv Agency, Boston Mass Dalton R H St Louis, Donelson, Chas P, Chicago Dean, H M, Muscatine, Iowa, (**E**) Eustis W C, Owatonna Minn (**F**) Ferguson A H Winnipeg Manitoba, Forbes Diastase Co Cincinnati O (**G**) Griffin, C F, San Francisco, Cal Gamble W E Chicago (**H**) Holmes G R Avondale Ohio Hayes, C W Washington D C Hinton, J A, Friendship Tenn, Holtgrewe, F L St Louis, Mo, (**K**) Kengla, L A, San Francisco, Cal Kurtz, C E, Chicago, (**L**) Lewis C H, Oakland Cal Lippincott J R, Company, Philadelphia, Pa, Landon, Wm, Columbus Ill Lippman Bros, Savannah, Ga LaGarde, L A, Chicago (**M**) Malted Milk Co Racine Wis, McMurtry, L S, Louisville, Merrill J C, U S A, Washington, D C McArthur Hypophosphite Co Ansonia, Conn McDonell J L Detroit Mich, Miller, R E, Napa, Cal McEnroe J F, Schenectady, N Y (**N**) New York Phar Ass n Yonkers, N Y, Novelty Manufacturing Co Los Angeles, Cal (**O**) Opie, Thomas Baltimore, Md (**P**) Parke, Davis & Co Detroit Mich Poppe H B B Scandinavia Wis Preston, W T R, Toronto, Canada (**R**) Renz & Henry, Louisville, Ky Rio Chemical Co, St Louis, Mo, Rauch, Jno H Lebanon Pa (**S**) Stearns F & Co, Detroit, Mich, Sayre R H New York, (**T**) Tuttle H C, Rutland, Vt Tracy W J Norwalk Conn Taylor Jas L, Wheelersburg Ohio Topliff's Botanic Laboratory New York, N Y Traverse, A W Milwaukee, Wis Taylor Henry L, New York (**V**) Volding, M N Independence, Iowa (**W**) Widman, J F, McGregor Iowa Whitney, F E Hillsdale, Mich Westgate, J C, Detroit Mich Weeks & Potter Co Boston Mass Wooton W S Blue Island, Ill Warner, W R, Philadelphia Pa (**Y**) Young, E S Edgewater Va

The Journal of the
American Medical Association

Vol XXI CHICAGO, SEPTEMBER 30, 1893 No 14

ORIGINAL ARTICLES

AMERICAN INEBRIATE ASYLUMS

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY T D CROTHERS, M D
SUPERINTENDENT WALNUT LODGE HOSPITAL, ETC , ETC
HARTFORD, CONN

Institutional care and treatment of inebriates began first in this country, and up to this time has attained a degree of development and prominence greater than that of any other country of the world There are in Great Britain over forty asylums where inebriates are received and treated, and at least ten or twelve more in Europe, three are in India, two in Australia and New Zealand, and two opium hospitals are in operation in China With the asylums in this country, the number will reach to about one hundred and twenty in the world It is difficult to ascertain the exact number for the reason that many of these asylums are irregular in their work, and are associated with reformatories, sanatariums and homes for mental diseases

In Europe they are often sectarian church homes, and in this country many are private enterprises, dependent on the caprice of the managers and their successes This is incident to every new work, and the formative stage, or the period of credulity that is always followed by the age of reason

Asylum care of inebriates implies a recognition of disease and curability, which has been mentioned and urged for over two thousand years of the world's history From the time of Hippocrates (and even before), down to the beginning of this century, the idea of drink madness and drink excesses being a disease, and curable by physical means, with restraint, has appeared in the science and literature of every age Dr Rush's writings in 1790 and 1809, seemed to have formulated the vague ideas along this line, although several European authorities carried the subject farther on they were practically unknown in this country, hence Dr Rush may be said to have given the first inspiration and practical direction to the doctrine of the disease and its curability

This idea was repeated in various ways, over and over again, until finally in 1846, Dr J E Turner appeared as the first pioneer to build an asylum and demonstrate this fact

Although the disease of inebriety had been recognized by a large number of eminent men in both this country and Europe, and asylums for their cure had been urged by the Connecticut State Medical Society of 1830, and the English Lunacy Commission of 1844, and others, the opposition of moralists and clerical reformers was so bitter and intense as to prevent any practical work This has continued up to the present, only growing less and less

In the year 1846, Dr J E Turner of Bath, Maine, a practicing physician, became interested in the need of an asylum, from an ineffectual effort to save an early friend who was an inebriate

He recognized the nature of the disease of inebriety and the need of hospital treatment and began an enthusiastic agitation of the subject

He began by petitions and solicitations for money and influence to build an asylum, appealing to the New York State Legislature for years before a mere recognition was given So intense was the opposition that clergymen denounced it from the pulpit, and many of the religious and secular papers condemned the theory of disease and idea of an asylum as insane and opposed by all common sense and judgment

At this distance, this period of denial and persecution appears like a glimpse of the dark ages, and the medieval spirit that opposed every new truth of science

Finally, after ten years of persistent effort, despite the most bitter opposition he succeeded in forming a company to build an inebriate hospital, with the late famous surgeon, Dr Valentine Mott, as president

In May 15, 1854, the first inebriate asylum in the world was chartered by the New York State Legislature Laws were passed giving power to hold inmates and charter was granted The city of Binghamton bought a farm of nearly 200 acres of land and gave it to this company Donations of lumber, stone and all kinds of building material were made on solicitation The corner stone was laid in 1858, of what was later a magnificent building, and at one time the finest type of castellated Gothic architecture in the world Six years later a part of the building was completed and opened for patients

The founder, Dr Turner, was a man of indomitable perseverance and tireless energy, who worked on without aid from others, begging money and material and superintending the construction of all the details of the building At length in 1864, this first asylum of the world was opened for the physical care and treatment of inebriates at Binghamton N Y The principles of treatment on which it was established were simply remarkable in clear, defined, scientific conceptions of the nature and requirements of such cases Absolute restraint and control was provided, and no one was received for less than one year It asked no pledges or promises from the patient, it aimed to give each one positive protection and medical treatment The patients were locked in at night and only allowed out for exercise under the strict care of attendants Turkish baths were given twice a week, work rooms were provided for those of mechanical tastes Amusements of base ball, billiards, bowling and carriage drives were urged each day Each case was considered a suicidal case of insanity, requiring long medical care and restraint No question of honor, or appeals to the pride was considered, but in all, the use of exact means and measures were carried out with military exactness

These methods of treatment were far in advance of that time, and even to-day are just beginning to be recognized as the latest teachings of science The principles plan of organization, and treatment, although endorsed and supported by its distinguished presidents, Drs Valentine Mott and John W Francis, of New York, and Chancellor Walworth of Saratoga, created much difference of opinion and opposition The patients themselves, after the immediate recovery from the effects of spirits, protested against the confinement and doctrine of disease, and sought in every way through their friends to break up the methods of treatment As many of them had been influential men, and had prominent friends, a storm of the most bitter opposition began against the founder Two separate views or theories of treatment became the center of intense feeling The asylum and management insisted that each case was more or less diseased and should be under absolute control and restraint for long enough time to effect a permanent cure The patients and their friends insisted that while the case might be diseased, his recovery depended largely on his liberty and promise to get well That restraint was an irritation and an injury, also that appeals to his honor and manhood were the real agents for final cure The founder and his friends insisted on long, absolute restraint and military control of the case, with the application of means and measures above all caprice and emotional changes of the patient The opposition urged that restraint should be only nominal at first, and length of treatment vary with the man and his disposition, to which should be added moral appeals and moral remedies

After a long, bitter struggle, the board of management changed and adopted a practically free and easy plan of treatment and Dr Turner and his friends were turned out The central object was to make the asylum popular with the patient This unfortunate controversy gave new impetus to the moralists, and those who doubted the disease theory, and they joined in a wild crusade to show the folly of such institutions The bitter controversy which gathered about the management of this asylum attracted the politicians, and the noted William M Tweed of New York City, and others became directors

All this time the asylum was crowded with patients and the income was diverted to secure personal ends Finally in 1867 the board of management deeded the property to the State of New York for one dollar, ithout the advice or consent of any one From that ime a series of misfortunes followed during which
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Had the physical treatment of the inebriate been a theory, this would have been its final death But, like all other great enterprises of the world, the death of Binghamton Asylum marked the birth of a large number of similar asylums, some of which are doing grand work in the world The great fact that inebriates were diseased, requiring positive hospital care, was demonstrated to the world by Binghamton Asylum beyond all question

The advent of Binghamton Asylum was felt all over the world, even in far away Australia, an asylum was opened in 1859 that is still in existence In Europe many small asylums began, although opposed as bitterly as in this country, yet they soon came under church control and gave great prominence to the moral and ethical side, and thus escaped the criticism others received Long before Binghamton Asylum disappeared, a number of embryo institutions came into existence, many of which died from weakness and inability to bear the shock of opposition Others struggled and are living to day One of these early asylums was the Washington Home of Boston, which began in 1857 as an inebriate lodging-house in the center of the city of Boston

After years of opposition and serious trials it came under full medical management as a scientific hospital, and is now the oldest asylum in the world Its late superintendent, Dr Day, has had the largest experience in the management and cure of these cases of any person living This hospital has had its wild storms of criticism and persecution incident to every new advance of science, but now receives about four hundred patients yearly The second large asylum in the world that began in those early days and is doing good work, is Kings County Inebriate Home, of Brooklyn, N Y, Dr Blanchard, superintendent This was opened in 1867, and, from small beginnings, has gone on to be a magnificent hospital crowded with patients The disease of inebriety and the need of positive restraint and medical cure are the cardinal points of its management

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Notwithstanding the misfortunes of the first hospital and its founder, a large number of similar places have been organized and managed with success

As in all new enterprises, many of these hospitals must suffer from non-expert management and be organized on some theory of the nature and treatment of inebriety not founded on correct study and experience After a time they are abandoned or changed to homes for nervous cases and insane Over fifty different hospitals for inebriates have been established in America More than thirty of this number are in successful operation, the others have changed into insane asylums, water cures, etc Three large buildings or institutions are practically "faith cures," where all physical remedies and means are ignored Several asylums are called homes for nervous people, to conceal the real cause, and thus protect the patients from the supposed stigma of inebriety Others are literally lodging houses, where the inmates can remain a few days and recover from the effects of spirits Several places make a specialty of opium cases, in some the treatment is empirical In only a few of these hospitals is the disease of inebriety studied and treated on a scientific basis the others are passing through the ordeal of "elimination and survival of the fittest" incident to every new advance of science In many of the States large public hospitals are projected and awaiting pecuniary aid from the State or from other sources

Of the forty asylums in operation in Great Britain to-day, only a very small number are conducted on scientific principles, the others are church homes and charitable retreats where temporary care is given for immediate necessities A thorough scientific hospital has been doing grand work in Melbourne, Australia Another has been organized in New Zealand under a competent board of medical men, and both of these hospitals are a credit to the skill and judgment of the managers Two very well managed asylums are in operation in Germany and one in Switzerland A number of similar hospitals have been projected in Norway, Sweden and France In the latter country the inebriates are sent to insane asylums and placed in a ward by themselves This has become an abuse which the superintendents of asylums have strongly denounced The inebriate asylums of Europe are nearly all private institutions or under the control of churches and temperance societies The Dalrymple Home, near London, is one of the largest and best equipped in Europe

All these places, both at home and abroad, are yet in their infancy, not one of them are able to do the work that should be accomplished, because of the unjust criticism and obstacles which they have to overcome The results of treatment in the few scientific hospitals for inebriates are most encouraging The first statistical study was made at Binghamton Asylum in 1874 The object was to find out how many persons who had been under treatment continued temperate years after Accordingly, 1,600 circular letters were addressed to friends of patients who had been under treatment five years before, asking the present condition of the patient The answers indicated 62½ per cent as yet temperate and total abstainers This result, after an interval of five years, was clear evidence that a large per cent would, in all probability, remain cured during the remainder of life

Dr Day of Washingtonian Home, made a similar study of 3,000 cases who had been under treatment ten and more years before, and found over 32 per cent yet sober and temperate

Dr Mason of Kings County Inebriate Home, examined 2,000 cases who had been away from the asylum for ten years, and found 34 per cent of all cases yet cured He expressed great surprise at this result, as most of the cases were considered incurable at the time of treatment Other observers have made studies of a smaller number of cases with similar results

The most careful authorities of this country and Europe agree in the statement that fully one-third of all cases who come under treatment for periods of three months or more are permanently restored Other institutions where inebriety is treated as a vice, or by empirical methods, claim 80 and 90 per cent of recoveries It is needless to add that all such statements are not supported by published statistics In view of the chronic character of these cases and the imperfect means of treatment, the results so far are encouraging, and indicate great possibilities in the future from a better knowledge and control of these cases

Such is an outline view of the history and present condition of asylums *in this country* The rampant empiricism which is so prominent to day is indirectly rousing up a new interest in all asylums for inebriates The increasing crowds of relapsed cases whose faith in the gold cure specifics has been misplaced, are rapidly filling up all asylums, and come in a measure prepared to accept physical treatment and to appreciate the need of means and remedies There are ideals of the coming means and appliances essential for the successful treatment of inebriety towards which a few institutions are struggling Each year's experience brings larger and clearer conceptions, and each institution is becoming more adapted for scientific work in this field

An outline of the scientific treatment of inebriety in asylums in America will describe some part of the treatment common to each, but not yet attainable in its entirety, because of the numerous obstacles and want of support from public opinion and other conditions

The situation of an asylum in the suburbs of a city or in the country near large centers, with ample grounds for retirement and quiet living, are essentials A proper building, equipped with baths and all the appliances for comfort, with means of amusement, joined with ample legal power to hold the patient a year or more, are equally essential They should be called hospitals, not only in full recognition of their physical disabilities, but as places where every condition of life can be regulated and every surrounding can be made to aid recovery and restrain Literally a quarantine hospital, where isolation and removal of all the exciting causes, combined wit appropriate treatment to build up and restore deranged functional activities of the organism, c be obtained The time of treatment should be fro of insanity, requiring long medical care and restraint No question of honor, or appeals to the pride was considered, but in all, the use of exact means and measures were carried out with military exactness

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All this time the asylum was crowded with patients, and the income was diverted to secure personal ends Finally in 1867 the board of management deeded the property to the State of New York for one dollar, without the advice or consent of any one From that time a series of misfortunes followed during which seven superintendents were in charge in eleven years Then the State changed the asylum to an insane hospital, and a political governor, in justification of the act, called the inebriate asylum a failure Notwithstanding the conflicts of public opinion, and the changing methods of treatment by inexperienced men in charge, large numbers of persons went away permanently cured, as was clearly shown by statistics gathered the last years of its existence as an inebriate asylum The enthusiasm which had centered about this work at different times reacted, and the idea of failure and condemnation of asylum treatment for inebriates was spread far and near Had the physical treatment of the inebriate been a theory, this would have been its final death But, like all other great enterprises of the world, the death of Binghamton Asylum marked the birth of a large number of similar asylums, some of which are doing grand work in the world The great fact that inebriates were diseased, requiring positive hospital care, was demonstrated to the world by Binghamton Asylum beyond all question

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The Franklin Home of Philadelphia, Pa, was opened in 1872, and is receiving a large number of cases every year

The Walnut Lodge Hospital at Hartford, Conn, was opened in 1878 as a private corporate asylum, and has become prominent, although smaller than the rest

These five are the largest hospitals in the world for the treatment of the inebriate Over a thousand patients are received and treated yearly at these institutions

The Washingtonian Home of Boston, the Kings County Asylum of Brooklyn, N Y, and Walnut Lodge at Hartford, Conn, regard the inebriate as diseased, and treat such cases on broad scientific principles

The Chicago Home and the Philadelphia Home and some other asylums believe in the prayer pledge and moral influences as the most valuable of all means and remedies Also that a short residence in the hospital is better than long treatment Medicines are only used for temporary purposes

These two classes of asylums represent the same old battle which greeted the first asylum at Binghamton, only less violent The question of vice and disease as a compromise of half vice and half disease, is still the center of controversy The first three asylums and a rapidly increasing number of small private homes and hospitals retain the principles and approximate to the plans of treatment laid down at Binghamton in 1864, while the others have no fixed scientific conceptions of the nature and needs of the inebriate or his malady

Notwithstanding the misfortunes of the first hospital and its founder, a large number of similar places have been organized and managed with success

As in all new enterprises, many of these hospitals must suffer from non-expert management and be organized on some theory of the nature and treatment of inebriety not founded on correct study and experience After a time they are abandoned or changed to homes for nervous cases and insane Over fifty different hospitals for inebriates have been established in America More than thirty of this number are in successful operation, the others have changed into insane asylums, water cures, etc Three large buildings or institutions are practically "faith cures," where all physical remedies and means are ignored Several asylums are called homes for nervous people, to conceal the real cause, and thus protect the patients from the supposed stigma of inebriety Others are literally lodging houses, where the inmates can remain a few days and recover from the effects of spirits Several places make a specialty of opium cases, in some the treatment is empirical In only a few of these hospitals is the disease of inebriety studied and treated on a scientific basis the others are passing through the ordeal of "elimination and survival of the fittest" incident to every new advance of science In many of the States large public hospitals are projected and awaiting pecuniary aid from the State or from other sources

Of the forty asylums in operation in Great Britain to day, only a very small number are conducted on scientific principles, the others are church homes and charitable retreats where temporary care is given for immediate necessities A thorough scientific hospital has been doing grand work in Melbourne, Australia Another has been organized in New Zealand under a competent board of medical men, and both of these hospitals are a credit to the skill and judgment of the managers Two very well managed asylums are in operation in Germany and one in Switzerland A number of similar hospitals have been projected in Norway, Sweden and France In the latter country the inebriates are sent to insane asylums and placed in a ward by themselves This has become an abuse which the superintendents of asylums have strongly denounced The inebriate asylums of Europe are nearly all private institutions or under the control of churches and temperance societies The Dalrymple Home, near London, is one of the largest and best equipped in Europe

All these places, both at home and abroad, are yet in their infancy, not one of them are able to do the work that should be accomplished, because of the unjust criticism and obstacles which they have to overcome The results of treatment in the few scientific hospitals for inebriates are most encouraging The first statistical study was made at Binghamton Asylum in 1874 The object was to find out how many persons who had been under treatment continued temperate years after Accordingly, 1,600 circular letters were addressed to friends of patients who had been under treatment five years before, asking the present condition of the patient The answers indicated 62½ per cent as yet temperate and total abstainers This result, after an interval of five years, was clear evidence that a large per cent would, in all probability, remain cured during the remainder of life

Dr Day of Washingtonian Home, made a similar study of 3,000 cases who had been under treatment ten and more years before, and found over 32 per cent yet sober and temperate

Dr Mason of Kings County Inebriate Home, examined 2,000 cases who had been away from the asylum for ten years, and found 34 per cent of all cases yet cured He expressed great surprise at this result, as most of the cases were considered incurable at the time of treatment Other observers have made studies of a smaller number of cases with similar results

The most careful authorities of this country and Europe agree in the statement that fully one third of all cases who come under treatment for periods of three months or more are permanently restored Other institutions where inebriety is treated as a vice, or by empirical methods, claim 80 and 90 per cent of recoveries It is needless to add that all such statements are not supported by published statistics In view of the chronic character of these cases and the imperfect means of treatment, the results so far are encouraging, and indicate great possibilities in the future from a better knowledge and control of these cases

Such is an outline view of the history and present condition of asylums in this country The rampant empiricism which is so prominent to day is indirectly rousing up a new interest in all asylums for inebriates The increasing crowds of relapsed cases whose faith in the gold cure specifics has been misplaced, are rapidly filling up all asylums, and come in a measure prepared to accept physical treatment and to appreciate the need of means and remedies There are ideals of the coming means and appliances essential for the successful treatment of inebriety towards which a few institutions are struggling Each year's experience brings larger and clearer conceptions, and each institution is becoming more adapted for scientific work in this field

An outline of the scientific treatment of inebriety in asylums in America will describe some part of the treatment common to each, but not yet attainable in its entirety, because of the numerous obstacles and want of support from public opinion and other conditions

The situation of an asylum in the suburbs of a city or in the country near large centers, with ample grounds for retirement and quiet living, are essentials A proper building, equipped with baths and all the appliances for comfort, with means of amusement, joined with ample legal power to hold the patient a year or more, are equally essential They should be called hospitals, not only in full recognition of their physical disabilities, but as places where every condition of life can be regulated and every surrounding can be made to aid recovery and restrain Literally a quarantine hospital, where isolation and removal of all the exciting causes, combined with appropriate treatment to build up and restore the deranged functional activities of the organism, can be obtained The time of treatment should be fr six months to two years, and be governed by the condition of the patient and extend to a legal control on parole for a long time after leaving the asylum In Connecticut the law gives control over all committed cases for three years, whether on parole or otherwise in the limits of the State

The hospital should provide exact military restraint with duties and responsibilities, rewards and punishments suited to the condition and capacity of the case, also work, amusement and occupation, both mental and physical, as medicinal agents Every condition of life should come under exact military control, baths, exercise, sleep, food and medicines all to be regulated and applied uniformly Each one should be treated as suffering from profound disease of the brain and nervous system requiring long rest and building up The general treatment should begin with an examination and inquiry of the facts concerning his past life and present condition These examinations should be repeated every few weeks, because of the rapid changes and errors which are impossible to guard against in the first and later examinations The use of spirits should generally be abandoned very early in the treatment, and the return of the drink paroxysm anticipated by the use of drugs, baths, exercise and special control

Many of the paroxysmal drinkers are practically epileptics and require similar treatment They are suffering from grave disturbances of the physical centers, and physical remedies are required in addition to other means Other cases are delusional maniacs and paranoiacs out of harmony with every condition of natural, healthy living, and unable to correct and adjust themselves to such conditions In others, nerve exhaustion is at the bottom of the drink impulse, inherited tendencies, reflex irritations, and many complex conditions which can only be discovered and treated in hospitals When these are treated the causes are removed, and the alcoholic soil is exhausted and dies away

States of poisoning from stupor to full delirium are made the subject of special treatment, according to the experience and theories of the physician These acute symptoms followed by chronic conditions, require equally special remedies and means

These are some of the general ideals in treatment to which every scientific asylum is moving All asylums suffer for want of ample legal authority over their cases for sufficient time to secure permanent results Public opinion regards asylums as of only temporary, and in most cases of doubtful value The theories of their work are openly termed "fads," and supposed to be founded on some mercenary or selfish purpose The pulpit, press and ultra reformers pass by on the other side, like the Levite Public patronage is withheld, and most all asylums depend entirely on the income of patients for support Hence they are more or less crippled in every way Many asylums suffer from poor location, bad buildings and surroundings, inability to classify their inmates and apply special treatment to each one In many places baths and systematic exercises can not be secured The nutritive hygienic and physical treatment can not be carried out on the ideals of the managers, hence many asylums are using the means within their power in anticipation, and looking forward for larger and more perfect facilities

The treatment of inebriety not only includes everything found valuable in hospitals for the insane, in reformaories of the most advanced type and in the modern sanitarian and homes for neurasthenics The essentials for treatment in each of these classes are required for the inebriate The asylum managed on the scientific plan of providing for the requirements of each case, must have the power of control, and special buildings the same as to the hospitals for the insane, the discipline and management of the modern reformatory and the appliances of the best sanitarians and private homes, then it can approximate to a measure of success in the treatment, that at present is only in outline American asylums are leading the world in these directions of practical work, and while no one has combined only in the crudest way these appliances, many asylums are approaching it yearly Asylums all over the world are at the beginning and infancy of their existence A great deal of preparatory work must be, done before they can reach the first stage of scientific work The moral remedies by appeals to the will power and morals of the case must pass away The delusions and palsy of the higher brain centers must be recognized, and dissolutions beginning in the ethical centers extending down to all the lower faculties must be studied The great fog banks of metaphysical theories of free will, moral depravity vice and wickedness, must disappear from all conceptions of inebriety, and its practical management in asylums Asylums and managers who act on the theory that the inebriate is half wicked and half sick are crippled Asylums and managers who attempt by drugs or moral appeals to restore and cure the victim are still far back in the stage of credulity The specific vaunter, who professes to break up the symptom for drink as if it were the disease itself, is an empiric, either ignorant or by design Asylums and managers who teach dogmatically the nature of inebriety and its only true remedies, are not very far along in their scientific work Asylums who claim large percentages of cures from certain means and remedies are nc worthy of confidence

Inebriety is found, when carefully studied, to be the most complex neurosis of modern research, dependent on heredity and many physical causes, also physical condition and environment that are not clear to the most minute study Asylums for treatment so far, by isolating the patient place him in the best condition for study of conditions and applying means for relief

The more thorough this study, the wider the range of causes appear, together with the means and methods of relief The most advanced asylum of to-day follows a general prospective plan of treatment, and has no specifics or no special theories that are not open to change and re-adjustment Beside a few general facts, which stand out like mountain peaks in a new land, all the intervening space is unexplored No one can speak dogmatically as to where inebriety begins and what the exact causes may be No one can explain the varied phenomena of drink storms, of the action of spirits on the brain, of the power of heredity, of the brain condition which demands relief by the craving for neurotics, of the sudden cessation of this drink impulse under unusual circumstances, of its equally sudden outburst from causes unknown Even in asylums the same uncertainty exists Cases that seem restored relapse, and others that are considered incurable become restored, showing that our present knowledge is very imperfect, and the known is comparatively nothing in contrast with the unknown

Running through all this phenomena of inebriety is an outline of a uniform movement of cause and effect, of events following each other according to some law, good examples are the periodicities of the drink impulses, and the outbreak of such impulses from the presence of certain conditions that can be foreseen and studied Patients under care in asylums present a remarkable uniformity of symptoms and progress that is often startling to the student Not unfrequently such cases can be anticipated and the results of treatment known far in advance The drink symptom is dependent on some conditions of brain degenerations and changes It will suddenly die out and disappear under the most adverse conditions and surroundings Examples are numerous of persons who become temperate sign pledges, and stop all use of spirits under the most unfavorable circumstances Every temperance and revival meeting furnishes illustrations of persons who are restored permanently, although the same means have been used many times before with no results

Persons are known to stop drinking from the slightest supposed reasons, and in all these cases the last means used are credited with being the active causes The true explanation in all these cases is that some change or evolution of brain function has occurred and the drink symptom has died out It is not the last prayer pledge or solicitation of others, or the last drug or remedy of special means used that has caused this change Other and more obscure causes are at work, and the time comes when their action is apparent in the cessation of the drink impulse Physicians in charge of asylums recognize this fact, and realize that their best efforts are in building up the brain and nervous system, and placing the organism in the best possible condition for both organic and functional change Remedies directed to the drink symptom are never curative, a dose of mercury acting on the liver is a rational method, more so than bromid to check the drink impulse

Asylum study of these cases show that inebriety is often a symptom or phase of a neuroses which may break out and change to some other form General paralysis, melancholy, and many forms of insanity, together with tuberculosis, and various neurotic affections follow frequently on the subsidence of the drink craze

The statement that the gold cure specifics are followed by an increased number of insane among those who have used the treatment must be a literal fact The proof of such a statement is found in the experience of every asylum, and the general principles of neurotic diseases The number of such persons can not be easily determined, but the more powerful the narcotic used to stop the drink symptom, the more certain insanity and profound degenerations of the brain centers will follow

All asylums for inebriates suffer from the large number of incurable inmates Persons, who, after an uncertain course of treatment go away, relapse, and condemn the asylum for their failure Much of the current opinions concerning asylums are formed by the irresponsible statements of incurables Such persons seem to take pleasure in denouncing asylums in every place, and boasting of the intrigues of its inmates On the other hand, persons who have received substantial benefit conceal all reference to their treatment and residence in an asylum The result is that, all institutions are judged by the unthinking public from the statements of those who have failed to receive any benefit from its work Unthinking physicians who suppose that the control of the drink craze is the central object of treatment often lend their influence to unfavorable criticism of asylum work This, joined with bitter condemnations of moralists, complicate and increase the difficulties of every practical asylum, trying to understand scientifically this new field of medicine

American asylums have many advantages over all foreign institutions, in freedom of caste and prestige, also in ability to follow independent lines of work and rise above the prejudices and opposition of those who dread change and advance Some general conclusions may be stated, as follows

1 The asylum care and treatment of inebriates began first in this century, and has grown and extended to all civilized nations of the world

2 American asylums have developed the disease theory and the practical character of physical treatment in institutions, beyond that of any others in this field

3 Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood, with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood when reason and judgment begin to reign

4 A few of these asylums discern some great outline truths which may be stated with confidence as ideals towards which there is a rapid movement

5 Inebriate hospitals must take the place of jails and station houses

Such places are dangerous in their mental and physical surroundings by intensifying the degeneration and removing the patient beyond hope of recovery They are in many cases literal training stations for mustering armies of chronic maniacs that never desert or leave the ranks until crushed out forever

6 Inebriate hospitals should receive the incurable inebriates and make them self supporting, and build them up physically and mentally

They would relieve the taxpayer and relieve society of untold burdens of sorrow and misery

7 Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus return a large number to health and sobriety again

8 Inebriate hospitals can and should be self-supporting when once established They should be managed on scientific business principles, like military training schools

9 Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for accidents which grow out of it

10 These are the realities which every inebriate hospital is approaching and which all experience points out as practical and literal in the near future

11 The inebriate hospitals of to day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned, and working against innumerable obstacles

12 Lastly, there is an intense personality in inebriate hospitals to each one of us

They may bring salvation and restoration to some one near and dear

They may be fountains of healing whose influence shall cross and influence our pathway in many ways

13 Inebriate hospitals and their work are the great new lands which only a few settlers have reached They are calling to us to come up and occupy, and thus help the race on in the great march from the lower to the higher

Dr J K King Watkin's Glen—The essayist deserves great praise and credit for his long and patient work in this often unthankful line The doctor stands eminent in this line of work I have had opportunity to watch him very closely many years, and I consider him probably the best representative in this country on the view of inebriety being a disease I do not know how many of us would go as far as he does in that line, but certainly he has done advanced work and has brought out that side I have had a good deal of experience myself with these cases in various forms of treatment, and I seem to recognize in them two great elements one is the element of disease which is a form of neurasthenia, and the other is the element of habit I recognize habit as entering very largely into this thing, and there is no question but that habit after a time may become a disease Now the methods of treatment lie in two lines one is that of public inebriate asylums and the other of private institutions The question is which is to take the advance The public institutions are always subject to the danger that Buffalo and Binghamton have met, that is, getting under the influence of politics and following the unfortunate history of the asylum of which Dr Dewey was the head Private institutions lack one great quality of the public, that is, the ability to hold and retain the patient for a long time The doctor has mentioned the length of time, and it seems to me from my experience that time is a great element in these cases I have never found much difficulty in breaking up what you might call the disease Turkish baths and other things, building up the system, etc , answer that purpose, but the difficulty is to retain them long enough, until the habit is broken off and until the moral character and the physical strength are established sufficiently for them to stand and let it alone There lies the secret When we can solve that question, we will have no difficulty in curing a great many, but the difficulty is to retain them long enough Just as soon as a man who is accustomed to drinking gets fairly over it, his spirits rise at once and he thinks he is a free man and he is capable of going anywhere and having no trouble in the future, and he again rushes into temptation, and before he knows it is drinking The fact is, the institutions do not retain the patients long enough to establish their physical and moral character The doctor's idea of a State institution supported out of the funds that come from the sale of liquor is a very good one, but the question is, how long before it can be carried out? It reminds me of something that I saw when in Oklahoma last fall In one of the principal streets in Oklahoma city there was a very large saloon where everybody seemed to go, and right overhead was a Keeley cure, so they went right together, they got finished up downstairs and went upstairs to recover So I am afraid it will be in this question of establishing asylums out of the money that is received from the sale of liquor

Dr J G Kiernan—The history given by Dr Crothers is exceedingly interesting, and he mentioned some matters which were noteworthy in regard to the New York experience He did not, however, call attention to one of the most peculiar performances under Tweed and the régime, which was the attempt to reform an inebriate physician by placing him at the head of the inebriate asylum of Binghamton, the gentleman being imported for that purpose from Chicago I may say here that the Washingtonian Home in Chicago is a theme of ridicule It is notoriously only a sobering up place, but so delightfully conducted that little arrangements of this kind crop up now and again, the inmates go off on a spree and their absence is first discovered in the police station No attempt is made at treatment, except a certain amount of moral suasion and the medical agency of the miraculous pre-Raphaelistic chart which the head of the institution has hanging on the wall, and which he descants on to the admiration of the inebriates

Dr Crothers ignored one fact, i e , that between 1864 and 1882 there existed what may be very well called the Philistine era of American psychiatry That was the era when every bit of insanity was crammed into a very short Procrustean bed, and medical societies seemed the mouthpieces of mobs to enunciate certain lynch law doctrine with regard to the insane It seems to me not a few of those blind sprees resemble in a great many of their characteristics the period of stupidity that occurs in many epileptics The reference to certain cases healed by prayer, etc , brings into consideration another element the doctor did not take into account Every one knows that under certain conditions, while the subject is not hypnotized, he is in a peculiar state of mind and peculiarly liable to suggestion That suggestion, that conception, coming under those conditions, dominate the man when nothing else will With regard to the legal status of the question, it is the same as with the criminal The inebriate can not be properly taken care of any more than the habitual criminal, until he is regarded on the same level as the insane Under our law in Illinois there is one very curious anomaly The inebriate is not for custodial purposes an insane person, while civilly he is, because when a man becomes an habitual drunkard you have a guardian appointed just the same as over an insane person or minor In other words, the disease theory, and it can be regarded as nothing else, is taken into account in what might be called the civil aspect of the subject, but in what might be called the criminal aspect it is totally ignored

Dr Clark Gapen, Omaha, Neb —I would like to say a word in regard to the suggestion of police control in these cases I am fully and heartily in accord with the doctor that this subject should be regarded and treated as a neurosis I think I can go as far as any one in the acceptance of that theory In my mind it is simply a vaso motor neurosis usually induced by long continued use of alcoholics, but sometimes the neurosis occurs without such influences, and seems simply to spring up, but I think that especially should there be a different control in cases of this kind from ordinary police cases Washington is the only city in the country that has adopted that police control The superintendent of police there takes this view of it and has arranged and equipped his department with reference to the management of those cases outside of the police station He does not take those cases to the police station unless it is absolutely necessary and the individual has no other place to control him temporarily As to the view that Dr Kiernan has just expressed, I think that is simply deficiency in the law, the law is simply behind science in that respect Chronic inebriety, that is this special form of temporary insanity, should for all purposes of control be regarded entirely as other forms of insanity are

Dr J E Emerson—I have one criticism to make It seems to me the doctor is in error in saying that there is such a disease as the drink disease I think it would be much more correct judging from my own observation, to say that the tendency to drink arises from a variety of morbid conditions, of conditions of imperfect development, which manifest themselves in some form of tendency towards indulgence in narcotics not necessarily a disease, but resulting from various conditions I do not think we can yet say that there is a disease One man has spasmodic paroxysms of drink, another man simply has a feeble will and falling in with boon companions, gets to drinking I think they should be classed as an entirely different condition Still I think we must all agree that there is a physical basis, either in imperfect development, or you may say in a condition of partial degeneration of the general nervous system, lowered tone, at least a physical basis

As regards the possibility of restraint which has been spoken of, our laws in Michigan provide for it, but in a very peculiar way They provide for the appointment of a guardian on the application of any near relative, any blood relative or husband or wife, this guardian under the order of the judge of the probate court may send such patients to any hospital, asylum or sanitarium for treatment, to be retained there at the option of the guardian, with the proviso that the guardian must make a report whenever called upon by the judge of probate who sends the case, or at stated intervals of six months I have in very many instances endeavored to get friends to place their relatives under the provisions of this law, but have never yet succeeded, although I have recommended it in many instances The judge of probate has been invoked and has simply said he could not carry out the provisions of the law Why, I never could find out

Dr John G Reed—I have been very greatly interested in Dr Crothers' paper and almost as much so with the comments upon it For some time I have been giving some extra attention to this department of neurology, and it is very singular how one changes his mind as he comes in contact with men I, at first, under perhaps the influence of enthusiasm, supposed that I had established some principles that would be abiding, and when I came to test them by the opinions of others, I was disposed to change them a good deal It reminds me a good deal of the saying that the friend of to day is the enemy of to-morrow and the enemy of to day is the friend of to-morrow It brings up the idea that this department of neurology is in a formative stage and that we hardly have any well defined principles of general application except in theory and those not well tested by clinical data The gentleman on my right, taking exception to saying that we have the drink habit disease, or that the drink habit should be called a disease, seems to me to be somewhat in error I hardly know how you will avoid using the term in the investigation of so broad and deep a subject It seems to me that the multiple conditions are those of constitutional or congenital deficiency, which finally blooms out in inebriety, and that this should as much be called a disease as those conditions which produce epilepsy and other classified neurotic conditions

Dr W H Wells, Marshfield, Wis —The paper just read is very interesting and very important to us all, and there are two views that might be taken of the neurosis side of the question, as to whether the neurosis is primary in the majority of cases, or whether it is acquired Now I think there are two classes that we have, one in which the neurosis is primary and a still larger class in which it is acquired from the constant habit of drinking As one of the members, in advocating the neurosis and sanctioning that view said, in the majority of cases it is brought on by the habit of drinking I think it is well established that this habit of drinking can be acquired, and the constant habit then does produce a neurosis The habit of drinking we can acquire the same as we can acquire habits of eating We can acquire a taste for articles of food that when we first begin to eat are very disgusting, and it seems to me that in the majority of cases the habit and the neurosis are acquired rather than that it is a primary neurosis You take the child born of drunken parents and the disease may be direct, primary and hereditary, while another boy may start out being healthy in all respects and thrown in the company of drunkards and the habit gradually fixed upon him, although he begins in a perfectly normal way and having no desire for it, but the desire is acquired and finally produces a neurosis that perhaps would require constant treatment in order to cure

Dr William Thomas Bishop, Harrisburg, Pa —I began to be a temperance reformer on the reform idea After a while I came to the good, sound, sensible idea that drunkenness was a form of insanity as much as horse stealing or any other similar disease, and I think the mistake that they make is simply trying to get away from the fact and trying to make a compromise I think that there is where the whole foundation is and the nearer you get back to it as medical men and recognize it as a fair and square issue, that it is a disease and that it is a form of insanity, that the law which governs it is the same as any other phase of insanity and the restraint the same, the nearer you will come to accomplishing what you want Another thing drop this indiscriminate use of the words, asylum and hospital I have a great deal of fault to find with our brother about that, he straddled from one side to the other, an asylum might be a place for those that are chronic Our State of Pennsylvania is just building an institution for the chronic insane, that would be an asylum, but as long as there is any hope, as long as this disease can be treated with a likelihood of cure then the term should be hospital I think the idea of having the hospitals or asylums supported from the revenue from intemperance is all nonsense Make the State realize the responsibility they have for the protection of these people and the protection of society There is no question but that some people are natural perverts just as much as they are natural horse thieves, while others acquire it One thing must be kept in mind, that is, the continued use of alcohol or any other stimulant will cause an absolute breaking down of the tissue just as much as the injury of a hand in coupling on the railroad or any other injury, it is a permanent thing and you can not get away from that You can only restore them the part that is left, you can not re-create, and the quicker we realize that it is a form of insanity and needs the same restraint and needs the same obligation on the part of the State for the same support, the nearer we will be to accomplishing what we need Take a man insane on any other subject and try to develop in him a certain degree of moral responsibility I went not long ago to a church service in an insane hospital, there were several hundred there An epileptic was seized with an attack and wanted to fight and there was an old soldier next to him who had been in the English army who became very enthusiastic and did not want to see this friend of his abused I said to him, You would not fight an old soldier, would you? and he quieted right down That will work, but you must remember that it is a disease and that the other is only an incident

Dr T D Crothers—I am glad to note such a general interest in a topic practically unknown You may theorize for a long time and not get at practical facts However, I will say that disease seems to be the only word that will explain the phenomena which appear in all these cases although it is to be deplored that we insensibly associate these vague terms, such as habit, vice and free-will in the most indefinite way with these cases Mere error confessed adds intensely to the disorder This is a new phase of neurasthenic disease that will have a very large future and we can only be investigators We should not theorize and think by so doing we have accomplished the highest good in this field

SARCOMA OF THE PIA AND BRAIN, SIMULATING BRAIN TUMOR, MONO-SPASM AND MONO-PARESIS, OPERATION, DEATH ON THE THIRD DAY

Read by title before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY J T ESKRIDGE, M D
DENVER, COLO

E T P, male, aet 50, Iowa merchant, was referred to me by Dr W J Rothwell His family history is excellent His health during childhood was good, with the exception of headache, from which he suffered considerably during attendance at school After he left school his headache ceased almost entirely He denies more than occasional use of alcohol, or excess in venery During his twenty-first year he contracted a hard chancre and a few months later he lost most of the hair on his head There were no other secondaries About seven years after the initial lesion of syphilis he married His wife lived nineteen years, and during this time she had several miscarriages, none of the children reaching full fetal development The wife died a few years ago with brain trouble (probably syphilitic) Mr P seemed to continue in firstrate health until the summer of 1889, when he began to suffer from uncomfortable feelings in the back of the head These sensations at first did not amount to pain, but as time went on he had occasional attacks of headache Two years after the first appearance of the head symptoms, or early in the morning of July 8, 1891, while he was *feeling quite well, without any aura*, he was seized with a general convulsion which lasted three or four hours He remained in an unconscious condition four days The attack was not immediately preceded or followed by headache During the next two months he felt nervous, his face was flushed, and he became sleepless, languid and lost flesh He did not suffer with a distinct head pain, but he experienced an apprehensive and confused feeling

In September, 1891, he experienced a seizure, during which he did not entirely lose consciousness The attack began by a sensation which he likens to the imaginary feelings caused by one inhaling some deadly poisonous gas with a vague, indescribable taste There was no distinct odor or taste Immediately following these sensations he felt a nauseated sensation at the stomach, and a peculiarly indescribable sick feeling in throat There was an increased flow of saliva, slight drawing of the face to the left, and he seemed to himself dazed

From October, 1891, till the time of his first visit to me (June 30, 1892), there has not been a day during which he has not experienced one or more of what he calls "nervous discharges" The attacks are said to be similar in character They have all been attended by a profuse flow of saliva

He has just had an attack in my office

He shakes all over, as if suffering from a violent chill, turns pale and moans There is slight twitching of the muscles of the left side of the face, increased flow of saliva on left side, the left thumb is drawn down into the palm of the hand, with slight flexor contraction of the fingers of the hand There is no loss of consciousness Immediately after the attack, which lasts only a minute or two, there is paresis of the left hand, wrist and face muscles, with slight ptosis and wrist drop Left pupil widely dilated He describes his sensations as oppressive breathing, a sick feeling in throat, with intense chilliness, a peculiar taste, which he describes as an 'electric taste" On questioning him further to ascertain if the sick feeling is not experienced in stomach instead of throat, he affirms that the sick sensation is in throat and left side of face He says at times he feels as if the entire left side of body were on fire

Examination, July 1, 1892 —Gait is somewhat halting, the left leg being used more awkwardly than the right On closing eyes and walking backwards and forwards the disparity between the legs is more marked There are no distinct ataxic movements of legs, trunk or arm muscles Right leg muscles are much stronger than the left Dynamometer R 150, L 142 Knee jerks R nearly normal, L sluggish, but variable, and increased by reinforcing Deep reflexes of arms, increased, and nearly equal in each arm Plantar reflexes, absent on *both* sides, although stroking the plantar surfaces causes some contraction of the leg muscles Cremaster reflexes, present and about equal Lower abdominal and epigastric reflexes, absent The abdomen is very large, and covered with a thick layer of adipose tissue He has double inguinal hernia All sensory phenomena normal on right side On the left side all sensory phenomena blunted, but not abolished except in parts to be noted In left leg temperature sense is most affected Cool substances are readily recognized as such, but warm substances make no impression as such until they have been in contact with the limb a few seconds, and then the impression is much less distinct than that made by the same substances in contact with right leg Touch, pressure, posture and localizing senses seem to be slightly lessened in right leg Pain sense is normal, or nearly so On the trunk, little or no difference is recognized in the sensory phenomena of the two sides On the index of the little finger of left hand he is scarcely able to recognize two substances as such even when held three times the normal distance apart In other portions of the left hand, in left arm and face, there is only slight blunting of the sensory phenomena, less than is found in the left leg Smell, normal Taste nearly normal, except on the left side, just immediately after an attack, when it is temporarily, nearly lost Hearing R 1-12, L 1-12 Tuning fork is heard about equally distinct in each ear

Eyes R v 20-40 All fields slightly narrowed Pupil normal in size, and reacts to light and accommodation Some whitish atrophy of optic nerve Arteries nearly normal in size, veins full and slightly tortuous L v-20-200 Yesterday just after one of his attacks, the pupil was dilated to three times the size of the right, and it did not react to light or accommodation To-day the pupil is normal in size, and reacts well to accommodation, but slowly to light Fields all lessened, temporal absent Nerve very white, and shows distinct atrophy Some drooping of upper lid

He is ordered ten grains of potassium iodid thrice daily, and the dose to be increased five grains each day

July 3, the medicine has not been given regularly On the night of the fourth, he has a convulsive seizure, beginning in the left side of the face and extending throughout entire left side of the body and limbs, and three attacks of like character on the night of the fifth During these seizures he is unconscious July 6, he is taking thirty grains of potassium iodid thrice daily, and one-sixteenth of a grain of the bichlorid of mercury is given with each dose of the potassium At 6 P M I find his face of a purplish color, he is very weak, and left side of face paralyzed Dyn R 120, L 37 Saliva is constantly flowing in great quantities Speech is thick, but he has no aphasia Memory very poor During the day he has had several convulsive seizures limited to the left side of the face, but consciousness has not been lost On the seventh and eighth he has had three or four convulsive seizures in left side of face, but no disturbance of consciousness Immediately after an attack speech is impossible, and the muscles of the entire left side of the face are paralyzed and remain so for some time after the muscular twitching ceases The auræ preceding the attacks are electric, shock-like sensation in left side of face, with a flat or stale sense of taste, and great burning in left side of face On the ninth he has several somewhat similar attacks, one of which I witness, and it may thus be described he shakes himself as if feeling chilly, complains of an intense and disagreeable cold sensation running up the upper portion of spine, and almost immediately the muscles of left side of face began to twitch The left masseter seems to be the first muscle affected, then the left eye becomes convulsively closed and opened, followed by tonic closure of the eye, left side of forehead is next corrugated and drawn to left, mouth is now drawn well to left with clonic twitching of the muscles, and immediately following this, the left masseter and platysma myoides muscles begin a series of clonic convulsive movements which are kept up several minutes Finally the left trapezius and left posterior neck muscles become tonically contracted and draw the head backward and to the left The sterno-cleido mastoid muscle does not seem to be affected The left masseter and platysma muscles keep up a clonic contraction several minutes after all the other muscles cease to be affected Within a minute after the convulsive movements begin, the left hand drops, and the left wrist and hand muscles are completely paralyzed I ask him to raise his right hand and arm He does this without hesitation, but is unable to move the left hand The paralysis of the wrist and hand passes off before the platysma and masseter muscles cease to twitch During the attack there seems to be some spasmodic action of the muscles of the pharynx and larynx, most marked on left side, but affecting the muscles of the right side to some extent At the height of the seizure the right masseter muscle occasionally twitches The seizure lasts about ten minutes and during this time he is unable to open his mouth After the attack the muscles of the left side of the face are completely paralyzed and flaccid, and remain so for several minutes This side of the face is paretic between the seizures He remains speechless for several minutes When he is able to talk, he tells me that "at the commencement of the attack he experiences an electric shock, which seems to shoot through the entire left side, including arm, trunk and leg as well as the face"

July 10 He is now taking seventy grains of potassium iodid thrice daily, and has had three attacks similar to the one described, but he thinks they are less severe

July 18 He is now taking 110 grains of potassium iodid thrice daily, and has experienced no convulsive movements for three or four days, although he still has chilly sensations in back of neck three or four times daily Vision has greatly improved Right eye, v-$\frac{1}{2}$, with nearly normal fields, L v-$\frac{2}{7}$ All fields except temporal, which is lost nearly up to median line, nearly normal

Aug 1 No convulsive movements of any muscles since July 15, but he experiences what he calls "explosive cold spells" two or three times each day The cold sensation, which he says is intense, begins in left cheek, and spreads over left side of face, down spine and over left side of body There is constant tremor of the left depressor anguli oris During last two days he has had headache for an hour each day

Sept 1 Only slight change in symptoms since last record It has now been six weeks since he has had any convulsive movements The tremor in the left depressor anguli oris still continues About two or three times each day he has a "deathly" sick sensation arising from stomach, and almost instantly he experiences a cold or freezing feeling, which begins in left side of face and passes down left side of trunk He is now taking 125 grains of potassium iodid and one-twelfth of a grain of corrosive sublimate thrice daily, and seems to have but little inconvenience from these agents He has gained considerably in flesh

The diagnosis is tumor in the lower Rolandic region, and an operation has been discussed, but owing to the probable syphilitic nature of the lesion it is discouraged in favor of continuing the antisyphilitic treatment General sensibility, including tactile, temperature, pain, muscular, posture and localization senses, normal

Early in September (1892), he becomes mentally greatly depressed, is apprehensive and says that he is losing his memory There is no decided headache, but a dull, confused sensation in the head is constant There are no convulsive seizures, but he still experiences the "cold sensations" He now becomes urgent for a surgical operation, and says that he would rather be dead than endure the mental suffering that he has to undergo He fears, if something is not done to relieve him, that he will commit suicide After explaining to him the unsatisfactory results following operations for the removal of syphilitic growths of the brain, owing to the tendency of the disease to involve adjacent portions of the brain and membranes, he decides to take the risk, saying if he could not get relief he is determined to die The entire left side of face still remains paretic

On Sept 10, 1892, Dr Parkhill, after employing thorough aseptic measures, makes a trephine opening in the skull one and a half inches in diameter, with the center of the trephine over the lower extremity of the fissure of Rolando The bone is quite thick and very hard On exposing the dura its external surface seems normal There is undue tension of the membranes and no pulsation is discovered On applying the poles of a faradic battery over the exposed membrane no contraction occurs in any muscle The dura is opened and considerable watery fluid escapes Feeble pulsation of the brain is now observed The pia is opaque and greatly thickened, so that the convolutions of the brain can not be seen through it Portions of the pia are from one-quarter to one-third of an inch in thickness On applying the Keen double electrode, attached to a Flemming faradic battery, to the exposed brain substance, and using a current sufficiently strong to produce smart muscular contraction when applied to the hands, no muscular contraction takes place The trephine opening is enlarged in all directions, and the same opaque and thickened condition of the pia is observed A small incision is made into the brain substance, but nothing abnormal is found except brain substance is darker and firmer than normal

With the thickened condition of the pia it is thought best not to explore the brain farther

The patient stands the operation fairly well The parts are dressed antiseptically and he is placed in bed, carefully surrounded by warm bottles

Before the operation he made me promise that I would not let him suffer much pain after the operation, and that he should have sufficient morphin to make death painless should his case prove incurable The operation was finished about 1 p m He sleeps until 5 p m, when he awakes and complains of agonizing pain in the head He is given one-quarter of a grain of morphin hypodermically The same dose has to be repeated once or twice during the night, as he insists that his suffering is unbearable The day after the operation his pulse, which had been about 100, increases to 120, his temperature arises to 101 degrees, and he is restless and complains a great deal of pain in the head He refuses food, and it becomes necessary to force nourishment upon him Two or three hypodermic injections of morphin, one-quarter of a grain each, are necessary to quiet him during day On the morning of the second day after the operation he is evidently failing rapidly During the night he has had several convulsions limited to the left side of the face, and one which involved the whole of the left side of body As the forenoon wears on he sinks into a stupor, and by the afternoon he is profoundly comatose He died quietly at 6 p m, about fifty-three hours after the operation

Sectio cadaveris, three hours after death The brain only was examined On removing the dressing the wound was found to be free from pus, and no evidence of inflammation was present The dura was not abnormally adherent to the skull cap The veins and sinuses of the dura were distended with fluid blood, but the external and internal surfaces of this membrane presented no macroscopic pathological changes On removing the dura, the pia over the greater portion of the right frontal lobe, over the right Rolandic region and over the right temporo-sphenoidal lobe laterally, appeared opaque and thickened The greatest thickening of the pia was over the lower Rolandic region, where it was at least one-quarter of an inch in thickness The pia, over the entire surface where it was opaque and thickened, was abnormally adherent to the brain substance, and in some places, in endeavoring to detach the pia from the brain, portions of the cortex came off with the membrane On carefully sectioning the brain no gross lesions were found, except in the lower Rolandic region, especially in the lower face center, where the cortical substance seemed abnormally dark The incision into the brain substance, made during the operation, was found to be in the lower portion of the ascending frontal convolution, on a level with the lower end of the fissure of Rolando Portions of the thickened pia and of the cortical substance of the brain, immediately beneath this membrane where pathological change seemed the greatest were hardened in Muller's fluid for three months

Microscopical Appearances—"Pial membrane thickened, in places fully an eighth of an inch (one-fourth to one-third inch in fresh state)

"This thickening is due to small round cells in a delicate gliomatous tissue Blood vessel walls thickened, intima thicker than normal complete occlusion of some vessels The tissue takes the stain very readily

"*Diagnosis*—Sarcoma (small round-celled) Glioma Tumor mass in membrane

"Sections show a delicate capsule of connective tissue, covered by endothelial cells From the capsule delicate bands of connective tissue run into the mass, forming lobules which are in some parts quite large In other parts of the tumor no lobular arrangement is found, but the tiny threads of connective tissue run in and about the cells

"The cells are small, round and nucleated

"In a few places near the center of the growth the connective tissue is somewhat condensed, forming rings In these rings of connective tissue are found large, round, yellowish masses, typical of psammoma Under a high power (×450) no cellular arrangement can be made out, but a center with fibrillated rings about it can be seen Many of the spaces in the center of the tumor contain nothing, but obviously they contained before section more of this psammomatous material

"In and around the mass of small round cells are large, round, well stained plates of material, the nature of which is doubtful No cell structure can be made out They may represent the first stage of the psammomatous change

"*Diagnosis of tumor mass*—Sarcoma of the small round cell variety, with gliomatous tissue and psammomatous change

"*Brain*—Every section shows round celled infiltration, extending through the gray matter into the white This infiltration is especially marked along the line of the blood vessels The stroma of gliomatous tissue is well seen

"*Diagnosis*—Sarcoma (glioma)

"E R Axtell,
May 10, 1893 "A S Lobingier"

A few points in connection with the clinical history of the case and the results of the autopsy and microscopical examination are worthy of comment

If a person who is suffering from symptoms of tumor of the brain gives a history of syphilis, we feel justified in looking upon the growth as being of syphilitic origin, further, should a trial with anti-syphilitic agents result in great improvement, we feel almost certain that the tumor is syphilitic in nature We have long since learned in the treatment of growths of the brain that if improvement does not follow the use of potassium iodid and mercury, it is no proof that the growth is not syphilitic In the case under discussion there was a distinct history of syphilitic infection, and on placing the patient on large doses of potassium iodid in connection with mercury decided improvement followed, so that for several weeks prior to the operation no convulsive movements of the voluntary muscles occurred

The auræ that preceded each attack were limited to the left side, and mostly to the parts on this side affected by the pial lesion on the opposite side of the brain The aura connected with the sense of taste was one of the first manifested in the history of the case, and may be accounted for by the pial thickening extending over a portion of the right temporo-sphenoidal lobe

Is it possible to determine in a case of tumor of the cortical substance of the brain whether the pia is extensively involved? When the pia is infiltrated with the growth one would expect to find severe and persistent headache, but in the case just reported headache was rarely present, and it was never severe The most important diagnostic symptom, it seems to me, pointing to pial involvement is the presence of two or more auræ occurring with or without convulsive movements Multiple auræ, occurring regularly and at about the same time, are suggestive of extensive cortical irritation, involving numerous brain centers, a condition that is probably rarely met with in tumors limited to the brain substance It is not probable that tumors of the pia can be removed with safety to the patient, on account of the extensive infiltration of the membrane in such cases

There are several other features recorded in connection with the case reported in this paper worthy of discussion, but I will at present only refer to one During the irritative stage of the growth before paresis became permanent, disturbances in sensory phenomena were well marked, most affecting heat, next tactile, and least of all, pain sense The sensory impairment was always most distinct immediately after an attack As infiltration of the cortical centers for the face and arm progressed, and paresis of the face became well marked, all sensory phenomena in these parts became normal, except for a variable period following an attack One explanation of this condition might be found in attributing to the cortical substance an inhibitory influence over the "sensory centers," whose inhibition is lost when paresis or paralysis results from destruction of the cortex Another interpretation of the phenomena may be found in supposing that other portions of the brain cortex may perform the functions of disabled areas

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CEREBELLUM CYST—ANTE-MORTEM DIAGNOSIS

Read in the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY WILLIAM C KRAUSE, M D
BUFFALO, N Y

For the history of this case and the pleasure of having made the observation, I am indebted to my friend, Dr Linus T McAdam of Buffalo, N Y

Name, Jacob M , age, 36 years, height, five feet seven inches, weight, 170 pounds, complexion fair, constitution robust, well developed Antecedents, nothing of particular note was elicited, family history good

Early History—The patient passed through infancy and adolescence, without any serious illness, never contracted syphilis or gonorrhea Some years ago he suffered a slight attack of insolation from which, however, he seemed to have fully recovered

Present History—On October 23, 1892, the patient consulted Dr McAdam for pain in back of the head, dizziness, nausea, peculiar revolving sensations in his head and on standing or while walking an inclination to be drawn backward So strong were these last sensations that while the patient was in bed he would be compelled to turn on his right side, his head deep in the pillow, or while working in a stooped position he would suddenly fall backward, and on several occasions received quite severe knocks on his head Along with these symptoms there coexisted a sub-normal temperature, slow pulse, furred tongue, loss of appetite, sallow complexion, discoloration of the conjunctivæ and constipation The patient was administered hepatic stimulants, but without obtaining any alleviation of the distressing symptoms A few days after this first visit he again consulted Dr McAdam and complained of great thirst and gave a history of polyuria On examination the urine was found to contain sugar in abundance and on measuring the urine it was found that he passed sixty to seventy ounces daily About this time (Nov 7, 1892), he experienced considerable difficulty in walking and was obliged to discontinue all work and remain at home With assistance he was still able to walk about the house but his gait was unsteady, staggering, with a marked tendency to fall backward and to the right

With the exception of the glycosuria and polyuria which subsided under careful treatment, the remaining symptoms gradually became more and more severe and a consultation was held The disease was diagnosed as of cranial origin but no definite diagnosis was reached All methods of treatment proving unavailing and desirous of further counsel the writer was called to see the case on January 17, 1893, with the family physician, Dr McAdam

The patient was found lying upon a couch complaining of intense occipital pains radiating toward the vertex On sitting up he felt dizzy, nauseated and as if his head were being pulled backward On attempting to walk his gait was staggering, with a desire to fall to the right and backward

Psyche—His mind seemed to be clear and unaffected, sleep, fair

Motility—The strength of the muscles of the extremities was diminished but no more than the inactivity to which he was subjected would warrant

Tendon Reflexes—The patellar tendon reflexes were slightly exaggerated Other superficial and deep reflexes were normal

Sensation—There existed no disturbances of the sensory nerves, trophic and vaso-motor disturbances were likewise wanting

Special Senses—Unfortunately the fundus of the eye was not examined, due perhaps to the fact that no ophthalmoscope was present An ophthalmoscopic examination was, however, promised but failed eventually to materialize No abnormalities whatever of the special senses were discernible

To me it seemed clear that we had to deal with some cerebellar neoplasm, but what its nature or origin I could not say The characteristic symptoms of cranial tumor, such as intense cranial pain, obstinate vomiting, vertigo, coupled with symptoms which we are wont to denominate cerebellar, as staggering ataxic gait, inclination to fall backward, occipital tenderness, etc , warranted the diagnosis arrived at

Not receiving the desired promise of speedy and certain recovery, the patient sought other advice, and the history or the course of the disease was unfortunately interrupted On the evening of March 15, Dr McAdam was hastily called and arrived in time to see the fatal termination Inquiry elicited the fact that for two or three weeks previous the patient developed a slight fever with occasional chills No convulsions were noticed at any time

An autopsy was made the following day by the writer, assisted by Dr McAdam, with the following results the calvarium was rather thick, dura somewhat adherent The pia was clear, vessels not markedly injected, Pacchionian bodies small and sparse The convexity of the brain appeared healthy, the convolutions were not flattened and the fissures were of usual depth The cerebrum was removed, beginning cephalad, the basilar structures carefully severed, and on cutting through the right side of the tentorium cerebelli, a clear amber-colored fluid flowed into the cerebral cavity The cerebellum was carefully removed, and in the inferior occipital fossæ was found about one to one and one-half ounces of amber-colored fluid On closer examination, the right lobe of the cerebellum was found to be flattened, boggy and considerably smaller than the left lobe This condition was quickly explained by the presence of a large cavity in the right lobe, the walls of which had collapsed and the fluid had escaped during removal of the cerebellum The entire right lobe appeared to have been undermined and virtually was nothing more than the walls of the cyst During the dissection and examination of the cerebellum the undertaker thoughtfully and thoughtlessly sponged the cranial cavity, thus depriving us of any of the cystic fluid for a more careful microscopic examination It is therefore impossible to say just what the character of the cyst was, whether it was the result of hydatid disease, or of inflammatory or hemorrhagic origin

My object in publishing the details of this case is not because it is an extraordinary one, or because the diagnosis was verified by the autopsy, but rather to prove that the symptom-complex of cerebellar disease is distinct enough to permit of more radical surgical procedure The writer is not aware that much has been done in this direction, and certainly in this case much might have been gained through surgical interference

The tendency of the patient to fall to the right and backward, and the discovery of the cyst in the right cerebellar lobe, would impress one with the idea of connection between disease and symptoms, both pertaining to the same side Whether this law holds true in every case, I do not pretend to say Another interesting fact was the temporary glycosuria and polyuria, its sudden appearance and its more sudden demise Whether this was the result of pressure, or whether it was merely accidental, must be left unanswered, although I believe the former to be the more plausible

382 Virginia Street

SPECIAL INFLUENCES OF ALCOHOL ON THE BODY

Read in the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY T L WRIGHT, M D
BELLEFONTAINE, O

In discussing the nature of inebriety, and the magnitude of its influence on mankind, it will be necessary to observe the effects of alcohol upon the physical body, upon the mind and upon the moral attributes

And first, let us consider some of the effects of alcohol upon the material organism

The influences of alcohol upon the human body are of a nature so intricate, so distracting and often so apparently inconsistent with each other, that it is difficult to classify them in a clear and satisfactory manner

These influences might be arranged into groups representing on the one hand, drunkenness, its relations and phenomena, and on the other representing physical degenerations, with their various connections and dependencies Perhaps as comprehensive a division of the subject as any would be as follows

1 The effects of alcohol upon the nerves,
2 Upon the blood, and
3 Upon the physical integrity of essential organs and tissues

This classification will no doubt prove to be defective, and the several lines and boundaries of distinction between its component parts will be, in many places obscure, or possibly lost altogether

1 In speaking of the effects of alcohol upon the nerves, it will be proper to advert to the impression of that agent upon the muscular sense Alcohol is carried everywhere by the circulation, and in drunkenness the functions of the muscular system are hampered and deranged This fact arises in a great measure from the peculiar property of alcohol, which imposes a degree of paralysis upon the nervous system, in all its several parts and qualities There is loss of muscular power, and also disorder in the functions of muscular coordination Movements are out of proper relationship with each other Partial paralysis from causes other than alcoholic, present when of wide application, similar appearances and defects Take a case of general paralysis of the insane—partial, however, in degree "This disorder," says Dr Tuke, "is marked by loss of coordinating power over the muscles, especially those of speech and locomotion Precise coordination of movement, such as is necessary for writing, sewing, playing upon a musical instrument, and like acquired and automatic acts, is much impaired, or quite lost" This is in every particular an exact description of the muscular disabilities of a person who is drunk The movements assumed in walking will betray the condition of a person, even when slightly intoxicated. The feet are not raised fairly and clear of the ground, and there is frequent scraping or slipping of the shoes upon the pavement

It has been said that "the commencement of intoxication was flushing of the face, indicating that the cervical sympathetic was becoming paralyzed"[1] This is probably true in most instances But especially in neurotic periodical drinkers, there is a remarkable deviation from this rule When the dipsomaniac, after a season of rest begins to swallow large quantities of strong liquors, "the vaso-motor centers in the bulb and cord" do certainly show indications of the toxic action of alcohol But they do not consist of flushing the face through paralysis The exhibition is rather that of spasm and rigidity, not only of the muscular system at large, but of the capillary blood vessels also,—their caliber being apparently diminished

The beginning of a season of drunkenness in the neurotic is commonly marked by paleness of the face. The features are sharp and contracted The nose is pointed, cold and colorless The eyes are *not* rolling and without expression, as in ordinary drunkenness On the contrary they are steady, although quick in movement They also are bright and penetrating The speech is *not* inarticulate, stammering and disconnected, but words are clear cut, perhaps "clipt," and evidently of spasmodic utterance The muscular movements although somewhat constrained are not staggering, incoordinate and uncontrollable In fact, while large quantities of alcohol may have been consumed, the appearances of intoxication which are the outcome of paralysis, are not always speedily developed The paralytic stage of drunkenness may not appear for many hours in the neurotic drinker, though of course that is not the rule The primary effect of alcohol upon the neurotic inebriate may be that of shock This alcoholic condition is not without its important bearings upon the question of inebriate responsibility, for as long as it continues there is danger of violent and unreasonable outbursts of rage and hate The consequences may be tragical, for there is an unnatural exaltation, both in the power and disposition to wreak vengeance for fancied wrongs Dipsomania has been described as an insane exhibition among a group of insane exhibitions—all symptoms of a central disease "The opinion which would make of dipsomania a separate disease, can not stand against a complete study of the facts It is a detached page in the history of the patient's disease which can not be understood if studied by itself"[2] Another authority says "It seems to me more correct to regard dipsomania as a symptom belonging to a general disease"[3]

The action of alcohol upon certain peripheral nerves marks it as a poison A long and persistent course of drinking is liable to produce neuritis in one or more localities in the organism This may prove destructive to the integrity and life of the special nerves affected Herein alcohol acts in a manner similar to other tissue poisons—similar for instance, to lead and arsenic The plantar nerve, the popliteal, the musculo spiral, the tibialis anterius, are some among the nerves for which the alcoholic poison displays its peculiar affinity When the drinker loudly complains of pains in his legs and feet, and talks of rheumatism and neuralgia, the probability is that he is suffering from alcoholic neuritis in his lower limbs

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[1] Buzzard [2] Magnan [3] M Foville

Among the larger and more prominent nerves which may come under the toxic influence of alcohol, are the phrenic nerve and the pneumogastric

To the evil influence of alcohol upon the vagus, is attributed serious irregularities in the heart's action Chronic pulmonary catarrh also, with paralysis and stagnation in the smaller and more remote bronchial tubes, may be referred to a kindred origin It is believed moreover, that the fatality of pneumonia so remarkable in the drunkard, is largely owing to the injury inflicted upon the eighth pair of nerves by the alcoholic poison

The first indication of alcoholic neuritis is change of sensibility—there frequently being severe pain But the morbid feelings may vary It is possible that they may become sources of troublesome hallucinations and of true insanity

The destructive effects of the alcoholic poison in neuritis may be seen in the condition of the nerve after the disease has run its course One description declares "The lesion of the nerves consisted of granular degeneration of the myelin, then partial removal of the products, causing varicosity of the nerve fiber, and lastly, complete disappearance of the degenerative debris, with collapse of the sheath "[4]

The alcohol of wine it is said, does not produce the nervous degenerations herein described Since the discovery of distillation, and the enormous consumption of distilled spirits during the last two hundred years, wine has lost the position of respectability once accorded to it by many of the ancient writers It is now looked upon with suspicion as a substance capable of leading the unwary into habits of vice and profligacy that were impossible before the discovery and use of the concentrated alcohols of modern days

The disturbing influence of the paralysis of alcohol upon the normal display of the inhibitory nerve functions is generally recognized Still, the facts and evidence on that subject are something obscure and incomplete, and they will not justify any labored effort towards detailed and specific description The paralyzing (anæsthetic) influence of alcohol upon common sensation appears to have been known in the most remote periods of time This is, in many circumstances exceedingly seductive, and yet, in its effects upon the mental and moral attributes it is often of very great injury

2 In discussing the several divisions of our subject, a very brief synopsis of the more obvious *effects of alcohol upon the blood* is all that can now be offered in that connection

A striking effect of alcohol upon the circulating fluid, is the production of changes in the appearance of its red corpuscles They suffer shrinkage, and often a material change of form Their color too, is affected, and they become darker under the alcoholic influence When alcohol is mixed with blood, the red portion of the corpuscle may escape from that body altogether The globules are deprived of their power to perform their functions completely and physiologically They are incapable of absorbing and distributing the amount of oxygen necessary for the healthful supply of the bodily structure In other words, "the blood globules when impregnated with the toxic spirit, have lost the property of transforming all their hemaglobin into oxy-hemaglobin "[5] Alcohol displays undoubted power over the white globules also, but the insignificance of its effects are not so readily demonstrable upon them as upon the red bodies

One of the consequences of the toxic influence of alcohol upon the red corpuscles is the undue collection of carbonic acid within the organism The retention of a portion of this acid is the subject of various hypotheses and explanations It is said, for example, that a part of the oxygen inspired combines with free alcohol in the circulation, converting a portion of it into acetic acid[6] This leaves an insufficiency of oxygen to properly change the character of the blood corpuscles from venous to arterial The theory, however, does not account for the shrinkage, and other structural changes which occur in the red globules when brought strongly under the influence of alcohol It is not therefore, simply a matter of defective balance, or of deficiency on one side or the other, but the influence of alcohol upon the red blood corpuscles appears to be really that of a *poison*

The harmful retention of carbonic acid in the human body when it is under the alcoholic influence, depends upon more causes than one The operations of alcohol are always complex The elimination of carbonic acid by the lungs is impeded by overcrowding the capacity of those organs The enforced exhalation of alcoholic vapor interferes with the normal ability of the lungs to expel the poisonous acid The toxic qualities of the retained gas produce general uneasiness and also special distress The headache which follows alcoholic intoxication is peculiarly violent, for the blood vessels of the brain are loaded with effete and noxious material But a very serious complication that may arise from the influence of alcohol, consists of the accumulation of large quantities of fat in different parts of the organism This may be owing to the fact that the constituent elements of alcohol, as well as of the waste and effete material in the blood, may undergo certain slight changes which result in the formation of fat In the chronic inebriate, fatty degenerations of the liver, heart, and elsewhere, are liable to appear, and these in many ways provoke functional irregularities

A deficiency of oxygen in the system may favor the establishment of the gouty or the rheumatic diathesis "There is no possible chance of relief to those who are inclined to the lithic acid diathesis, if they arrest oxydation by the use of stimulants and narcotics Arrest that oxydation by the use of alcohol, and you add to the amount of unhealthy waste which has to be removed Lithic acid can only be removed by oxydation "[7]

Intimately associated with the deficiency of oxygen in the blood of the drunkard, is the low temperature of his body While alcoholic paralysis exerts—no doubt by its inhibitory force—an influence in the reduction of animal temperature, the incapacity of the red globule to absorb oxygen and to eliminate carbonic acid, exercises an unquestionable tendency in the same direction In profound drunkenness heat has been known to fall as much as 8° F , and it has been shown that in some instances the normal temperature has not been restored for three days[8] The complaints of the drunkard himself (upon emerging from his condition of anæsthesia) indicate very uncomfortable sensations of cold When the inebriate begins to arouse from his torpor and stupidity, he is invariably chilly and shivering He draws towards the fire, or hastens to protect himself with an abundance of bed clothing

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[4] Hadden

[5] Beaumetz

[6] Beaumetz

[7] Alfred Carpenter

It appears to be a fact that alcohol may reduce temperature through the force of its paralyzing and anæsthetic properties It is a question with some whether the reduction of temperature through the establishment of toxic and pathological states of the blood is not probably as injurious in one direction as it may be beneficial in another In the high temperature and nervous irritation of typhoid fever, the effects of a topical application of alcohol (diluted) are sometimes of great value The application should be quite extensive over the abdomen The local anæsthesia will not only quiet superficial nervous excitement, but it apparently extends to the subjacent tissues Under this treatment the morbid temperature will materially abate Diluted alcohol may also be applied to the aching head and to the burning feet and hands This procedure may accomplish valuable results without interfering with the normal functions of the blood globules Should a degree of intoxication be induced, it may be remembered that abstractedly, intoxication may exist without a poisonous impression affecting the essential constituents of the blood, which fact in the reduction of morbid temperature is a point of no small importance

In the hard drinker a portion of the alcohol finds its way into the blood and remains uncombined It has a powerful affinity for water It is speedily found in every part of the bodily structure Of course much of it enters the system through the portal vein and the right side of the heart But alcohol also seems to *diffuse* itself throughout the organism directly It is in the breath immediately Emesis shows that it remains in the stomach for a very brief season indeed, while giddiness, confusion of thought and movement—in short, *drunkenness* shows that alcohol mounts at once to the brain

When there is a certain excess of alcohol in the system, the movements of elimination may proceed with a good deal of vigor But when the excess is removed, there remains a portion apparently in a kind of static condition At all events purgatives, diuretics, diaphoretics, the lungs themselves, appear to exercise a limited power only in its final disposition It is not unlikely that certain structural degenerations may be connected with this state of facts, and especially fatty accumulations and other hyperplasias

Delirium tremens is indicative of a brain saturated with alcohol The natural wetness of the brain, containing as it does a very large proportion of water, probably invites the presence of alcohol more urgently than is the case with many other organs However that may be, it is an opinion widely held that in delirium tremens there is a direct poisoning of the system at large, and especially of brain tissue, with alcohol pure and unchanged

3 Alcohol has been called the "genius of degeneration" Some of the prominent changes in the structure of important organs, when the outcome of alcoholic impression, are indeed of great interest, and a brief notice of them will not be unprofitable And first of the heart

"The heart of the inebriate at first is made tense and full by alcohol, but is easily depressed Under this depression, however, the circulation becomes of a character that has been termed *rotten* The continued use of alcohol tends to permanent enlargement and dilatation of the heart, with stretching of the valves—especially the semilunars There is also distension of the arterial system throughout, leading to loss of elasticity There may be a feeble, large heart, dilated arteries, enlarged and bulging veins. The corporeal mechanism of the heart is, in fact, changed altogether Such a condition of the circulation would necessarily occasion much uncertainty both of the mental and bodily functions"[9]

Again In the fatty degenerations common in alcoholic inebriates, both in the light daily drinker and in the habitual drunkard, the heart is frequently implicated The substance of the heart is permeated with fat globules, and its strength and endurance are impaired

It is believed, moreover, that the structure of the heart may be seriously affected in consequence of alcoholic degeneration of the eighth pair of nerves[10] The muscular tissue of the heart, it is supposed, may undergo shrinkage and atrophy from this cause, in a manner similar to the shrinkage of the leg from the toxic influence of alcohol upon the nerves there distributed

The heart may also become exhausted through its too frequent and irritable pulsations in the daily drinker The physiological rest between the heart beats is not permitted to take place In this as well as in the several degenerations already named, there is incapacity of function, and heart prostration is, to some degree greater or less, always impending

Degenerations due to alcohol very often affect the liver They present a variety of aspects Fatty degeneration is the one most commonly met with The liver is enlarged in this affection, and it is loaded throughout its whole extent with fat

Another prominent form of hepatic degeneration is cirrhosis, producing the so-called "gin liver" The gland presents a contracted and solidified appearance with a rough surface, from which it has been also designated the "hobnail liver," "nutmeg liver," etc.

The kidneys may likewise become the seats of fatty deposit, and they too are liable to undergo the characteristic changes in structure indicative of fibroid degeneration

A remarkable property of alcohol is sometimes displayed in its influence upon the connective tissue of the organism There may be hyperplasia and considerable enlargement of this substance This is not simple hypertrophy, however It is a consequence of the toxic impression of alcohol The tissue implicated in this alcoholic hyperplasia is invested with properties quite different from the fibrous tissue in its physiological state After a season of enlargement, it takes on a process of contraction This movement is so marked that entire organs are misshapen, indurated and radically impaired in function The fibers of the shrinking mass enclose the substance of the liver, or kidneys, or other organs in their embrace, and the outcome is the gin liver, the kidney with interstitial nephritis, and the like disasters elsewhere These phenomena are the direct results of the poisonous qualities of alcohol—there is nothing normal nor physiological about them

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[8] Dr B W Richardson

[9] B W Richardson

[10] Dr Sharkey

The drunkard's brain has an abnormal amount of serum in it This is owing, in part at least, to atrophy and it "resembles in this particular the brain of the senile condition—of old age The convolutions look small, the sulci deep, and in most cases the pia mater is easily removed"

The membranes of the inebriate brain, including the dura mater, are *often thickened, and they may* display other indications of organic disease "The structural lesions of the brain show patches of sclerosis and other evidences of injury that are due to alcohol, and, in fact, these may resemble the changes that are found in the brains of paretics" It is true, however, that these degenerations are absent from a very large proportion of inebriate brains

The relations of alcohol to paralytic dementia have been the subject of much controversy There is one point, however, upon which all seem to agree in regard to that question, namely Alcohol may become an exciting cause in the production of paralytic dementia in certain constitutions, as, for instance, when great mental labor has been forced upon a brain incapable of sustaining the strain necessary for its performance The principle has been expressed thus (the alcoholic habit being present) "Enforced functional strain with incapacity to bear it, or disproportion between functional activity and power of resistance, may end in paralytic dementia" To this extent, at least, alcohol may be classed among the causes of paresis, and of the physical degenerations found in the brains of the paralytic insane

Enough has now been said of the effects of alcohol upon the physical organism to indicate the nature and extent of their application It is comparatively easy to investigate the bearings of the facts presented upon the mind and upon the moral constitution of the inebriate

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ON THE CARE OF EPILEPTICS

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY FREDERICK PETERSON, M D

NEW YORK CITY

Professor of Nervous Diseases in the University of Vermont, Instructor in Nervous and Mental Diseases at the College of Physicians and Surgeons, New York Attending Physician to the New York Hospital for Epileptics Pathologist to the New York City Asylum for the Insane

The care of epileptics really includes their medical treatment as well as all other kinds of help extended to them But medical care, such as it is, has been given to them for some thousands of years, and yet without adding much to the happiness of individuals under treatment, or accumulating much evidence of positive value concerning medication in epilepsy Our results have been, indeed, almost valueless, for, with all our dosing with bromids, borax, belladonna and so on through the alphabetical index of the Pharmacopœia it is extremely doubtful if in ordinary practice, 1 per cent of the cases of idiopathic epilepsy are cured Besides the practical incurability and hopelessness of the disease, its victims have suffered untold sorrows in the way of negligence and ill-treatment at the hands of the communities in which they live

It is a peculiarity of this disease that the seizures may be momentary or may last for a few minutes only, recurring sometimes frequently, sometimes daily and sometimes months apart, thus robbing the sufferers of their consciousness and faculties for brief periods of time at long or short intervals Between the attacks they may be as rational and as well qualified for all the vocations, duties and social privileges of life as any other human being

These facts do not concern only a few members of the community Epilepsy is a widespread disorder *and it has been calculated that one person in five* hundred is thus afflicted Thus there would be in the neighborhood of one hundred and thirty thousand such unfortunates in the United States alone, and over twelve thousand in the State of New York Even supposing this percentage to be exaggerated to a very great extent and that the actual ratio were one to one thousand, the number of epileptics would still be enormous and would constitute a large part of our defective classes

Outside of the efforts, thus far comparatively futile, of physicians to alleviate their purely physical infirmities, and to reduce the number and severity of the attacks, nothing has been done until late years to provide for their mental development and to meet the peculiar conditions of life which they are called upon to endure Thus, no general hospital will receive such cases for treatment, because of the incurable and unpleasant nature of their malady While much of the time thoroughly capable of acquiring an education, they are debarred for obvious reasons from the schools, the churches are closed to them, very few care to employ epileptics in shops, stores or offices or are willing to teach them trades Few epileptics are at liberty to enjoy the companionship of their fellows, who are rather inclined to shun their unfortunate brethren Thus, every avenue for mental or moral development, for occupation, for association with the rest of mankind is closed to them They are even burdensome to their families It is little wonder, then, that many of them grow up dull and ignorant, intellectually feeble, morally depraved, irritable in temper with tendencies to retrogression and degeneration rather than to advance A few of them become insane and are sent to insane asylums Others are not insane, but, ill adapted for existence under such miserable conditions, drift to the only homes offered to them, the almshouses The almshouse and the asylum are the only refuge when abandoned by their friends In the State of New York, for instance, where there are twelve thousand epileptics, some four hundred or more are in insane asylums, and some six hundred in the county poorhouses The rest of them are scattered throughout the State in their own families, among the rich and the poor, in ratio to the population and to the relative proportion of these classes Many are so slightly affected that they are able in spite of their seizures to pursue some of the ordinary vocations of life Thus, I know personally of a doctor, clergyman, several bookkeepers, a bank president, a stockbroker, several clerks, some dressmakers shoemakers, masons and a telegraph operator, who are epileptics, and yet able to carry on useful pursuits, albeit under adverse conditions To all of us are familiar certain well-known historical or literary characters in whom epilepsy failed to restrict the development of their genius, such as Cæsar, Napoleon, Moliere, Petrarch, Dostojewsky and others

It would seem, therefore, from the above facts that, although there is such a thing as epileptic insanity, the proportion of insane epileptics to sane epileptics is very small, much less than 10 per cent, taken at the utmost, and that this ratio may be reduced by affording these unfortunates such opportunities for mental and moral development as are enjoyed by other and more happily situated citizens, and not only may the percentage be reduced, but the comfort and prosperity of all epileptics be increased by proper provision on the part of the State or through private channels such as institutions of a peculiar character adapted to their peculiar needs A large public hospital is very far from meeting their requirements, for as has already been shown, medicinal treatment is uncertain and unpromising Insane asylums should receive but very few, and almshouses none at all What is demanded is an institution on the community or village plan, where medical treatment (such as it is) may be given to every member and where every sort of education, employment and social privilege commensurate with his needs and conditions may be extended to every beneficiary

The colony system only can attain this object A colony for epileptics is not an impracticable scheme proposed by visionaries It is already an accomplished fact The Bethel epileptic colony at Bielefeld in the province of West Thalia, near Hanover, Germany, was founded by Pastor von Bodelschwingh, over twenty-five years ago He purchased a small farm with one house, and with four epileptics as a beginning established a charity which for nobility of conception and success in its results has nowhere an equal It seemed to its beneficent founder, feasible to create a refuge where sufferers might be cured if curable, might have a home if recovery were impossible, might learn trades and the great majority become educated, useful and industrious citizens From that small beginning there has been a gradual evolution of his idea, until now there are over one thousand epileptics, resident in some sixty or more houses, scattered irregularly but picturesquely over a large farm Every one who visits this unique colony is deeply impressed with the happiness, contentment and prosperity everywhere apparent among the inhabitants of this little epileptic world He sees that it is no longer an experiment and the previously unanswerable objections to such aggregations are by its success answered and silenced At the time of my visit to Bielefeld, in 1886, there were but eight hundred and twenty-five epileptic patients The employments were numerous and varied A school provided instruction for some one hundred and fifty pupils of both sexes All branches were taught The dairy and the farm and garden occupied the attention of the greatest number of the patients, especially as a large trade in vegetable and flower seeds was carried on by the colony

Among the shops for epileptic workmen were those for cabinetmakers, painters, varnishers, printers, bookbinders, blacksmiths and foundrymen, tailors and shoemakers, and among the stores, were a grocery, pharmacy, bookstore and a seedstore The carpenters aided in the building and furnishing of new houses Plans and drawings for new buildings were made in the architects room Epileptics were employed in all the departments of industry relating to building Books were printed and bound and sold here, especially works for moral and religious instruction The illumination of mottoes for hospital wards and schoolrooms, and the coloring of picture cards were features of the work performed, washing, cooking, knitting, sewing and fancy work employed many A bureau had been established for the collection and sale of museum objects, such as antiquities, articles of ethnographic and historic interest, autographs of distinguished people, coins, stamps, bronzes, gems, engravings, etc, and specimens from the animal, vegetable and mineral kingdoms For men alone there were over thirty different callings

The houses presented great diversity of architecture and position They were well separated, generally enclosed in individual gardens, surrounded by fences, hedges and many trees, and altogether exhibited the homelikeness of a country village with little or nothing to suggest the restraints or discomforts of large institutions There was one small cottage set aside for such cases as should be mildly insane, but bad cases of actual insanity were sent to insane asylums Everything had been thought out carefully for the perfect evolution of this little social world, not only the multiplicity and details of occupations which would give each member of the community his choice of callings, but even the avocations, games, amusements and entertainments that might tend to divert his mind from the contemplation of his misfortune And since my visit the colony has continued to expand, to develop new and valuable features and to confer its blessings upon large numbers of persons afflicted with this disease

Taking Bielefeld as a model, nine other similar epileptic colonies have been established in Germany, one in Zurich, in Switzerland, and one in Holland Most of these are not conducted by the State, but are under the jurisdiction of private or church charities None of them are altogether self-supporting but some of them approach very near to it

It should be stated that before the founding of the Bethel colony at Bielefeld, a somewhat similar institution, though on a much smaller scale, was begun in France in the village called La Force, near Lyons Over forty years ago a noble clergyman named John Bost established this institution and it is in a flourishing state, doing a vast amount of good and redounding to the credit of its creative genius

It has been found in all of these colonies that no harm is done by bringing epileptics into contact with each other They feel on an equality with their fellows in such a place, losing that sense of isolation and singularity which they can not but observe in the ordinary world as separating them from the rest of mankind They enjoy caring for each other and being kind and helpful to their fellow sufferers It has been noted, too, that the number of seizures almost always diminishes upon entering the new and hopeful and encouraging life begotten by the busy community

Within two or three years, interest has been awakened in other countries in the matter of provision for epileptics, notably so in America and England, where their peculiarly sad condition had neither been noted nor considered In 1890 Ohio took steps toward the establishment of an institution for epileptics, a commission, consisting of Messrs J L Vance, C C Waite and one other having been appointed by Governor Campbell, pursuant to an act of the

Legislature to select a site and prepare plans for the purpose Of various sites examined, one at Gallipolis seemed best adapted for the project and here a tract of one hundred acres was presented to the State by the citizens for the institution To the writer, who was consulted upon the subject of site and plans, this seemed to be the best location offered, for, although an insufficient space for a large institution, there was plenty of land adjacent which could be subsequently added to the original tract Contrary to the advice of the writer the architect felt obliged, probably owing to the demand of the community of Gallipolis for an institution of striking proportions, to group the buildings on a symmetrical plan, such as is frequently carried out in the public establishments for the insane The Ohio epileptic hospital is built on the pavilion or cottage plan, a large number of these being grouped about the center or administration building It will, therefore, not meet in this important particular the requirements of a colony for epileptics, although in respect to provisions for school buildings, shops and the like, an effort has been made to fit the institution for the particular kind of care needed by this class The name of the institution for epileptics in Ohio is also unfortunately chosen, for it is called, "The Asylum for Epileptics and Epileptic Insane" The corner stone was laid with appropriate ceremonies November 12, 1891, an interesting address and historical review being given by General Roeliff Brinkerhoff, president of the Ohio State Board of Charities Three of the buildings were completed and made ready for occupancy in 1892 and nine additional cottages are now in course of construction, the last Legislature having made a liberal grant for the purpose In California, detached buildings are being erected upon the grounds of the California Home for Feeble Minded in Sonoma County, with the view of accommodating the epileptics dependent upon the State for pleasant quarters

Active measures are being carried out also in Massachusetts, Pennsylvania, Wisconsin and Illinois for the purpose of securing State care and separate provision for the same class of unfortunates

Next to Ohio, the State of New York has manifested the most interest in her epileptic dependants, and in the winter session of 1891-92 a law was passed by the Legislature making the State Board of Charities a Commission, to select a site and prepare plans for an institution for epileptics The law was authoritative in requiring the tract of land secured for the purpose to be four hundred acres or more in extent, and the whole scheme of buildings to be arranged on the colony or village plan A committee of the State Board of Charities, consisting of Messrs Oscar Craig, William P Letchworth, and Peter Walrath, has been busy all of the past summer and autumn (1892) in examining a large number of localities which they were invited to inspect by the officers of various counties In their report made to their Legislature on Wednesday, January 11, 1893, the State Board of Charities unanimously recommended for the proposed colony a site in Livingston County, consisting of over eighteen hundred acres, the property of the Shakers, now known as the Sonyea Society of United Christian Believers The Shakers have dwindled in numbers to such an extent that they decided to give up this colony and rejoin the mother colony near Watervliet, N Y The land is beautifully situated in the Genesee Valley, near the town of Mt Morris and in one of the finest regions of the State It is exactly fitted to meet the wants of a model colony for epileptics It is traversed by two streams One of these, the Cashauqua Creek, flows through the middle of the land in a deep gorge, with a fall of one hundred feet This gorge and creek give immense advantage for the complete separation of the sexes in free colony life The supply of water is abundant and the conditions for good sewerage perfect and adequate in every respect The Western New York and Pennsylvania railroad runs through the land and two great trunk lines, the Erie railway and the Delaware and Lackawanna railroad are within a mile of the proposed colony The soil is exceedingly fertile and well adapted for all manner of agriculture, horticulture, the production of berries and fruits for canning industries and the raising of garden produce and seeds of all kinds It has some stone and brick-clay, which will prove useful in the development of certain forms of outdoor employments It already contains scattered buildings for the accommodation of three hundred patients

The law which was introduced at the last session of the New York Legislature embodied provisions for the purchase of this tract of land and also for the methods of management, government and admission of patients to the colony As some of these may be useful to those interested in the establishment of similar institutions, a few of the chief points will be mentioned here

The name of the institution is "The Sonyea Colony" Thus, any direct reference to its object is avoided in the title The word "Sonyea," is an old Indian word, meaning sunshine, and is historical in that this point was once the site of an ancient Indian village of the same name For the present all insane epileptics are to be excluded, but probably ultimately there will be some building for the insane, especially for such as become mentally deranged temporarily while residents of the colony, since their removal from the happy influences of the community system to an asylum for the insane would be very depressing and tend to retard rather than promote their recovery

There will be nine managers appointed by the Governor, two of whom are to be women and two to be physicians They are to represent the eight judicial districts of the State of New York, an additional member to represent the city of New York

The colony is to have a medical superintendent, steward, matron and such teachers and other assistants as are necessary

The main object of the colony is to provide for the indigent epileptics of the State, but private patients will also be admitted to an extent to be determined by the Board of Managers Epileptics of all ages are to be received and cared for, minors are detained by authority delegated by the parents or guardians adults are free to go or remain, as they choose, there being no deprivation of liberty of any kind by methods of legal commitment, such as are necessary in asylums for the insane The charge for maintenance of indigent patients is to be borne by the State and a limit of $250 per annum per capita is established by the law But it is expected that the colony will eventually become, to a very great extent self-supporting

Patients that become insane are to be sent to asylums in the districts from which they come, in accordance with the lunacy statutes

A special pathologist to reside in the community and devote his sole attention to the discovery of the causes and cure of epilepsy, is one of the features ultimately contemplated in connection with this great institution

This bill was, unfortunately, vetoed by Gov Flower for reasons best known to himself, and the humane measures for the relief of the thousand epileptics already upon public charge in New York State is therefore postponed for a year or two

The care of the epileptic population is then summarized as follows

All are to be treated in accordance with the usual regulations as to diet, hydrotherapy and medicinal agencies, with the hope that in this way between 1 and 6 per cent of them may be cured and the disorder in a larger per cent ameliorated

Out-of-door employment in agriculture and kindred pursuits is to be provided in abundance All manner of trades and occupations are to be carried on in an epileptic community, organized on the village plan Facilities for education are to be afforded to almost every extent

Amusement and entertainment and the enjoyment of social intercourse are to be privileges from which no epileptic will hereafter be debarred

In this way the happiness of a large number of these miserable creatures will be materially increased, in spite of the distressing disease which they are called upon to suffer, usually for the whole of their lives, and though medical agents applied to their malady may prove inefficient their fate can never be as wretched and hopeless as it has been throughout the world heretofore

Although it is not given to every epileptic to describe his own sufferings as Dostojewsky does in his novel "The Idiot," or to delight the world with music as did the epileptic, Handel, or with comedy as did Moliere, or with poetry as did Petrarch, or with military exploits as did Cæsar and Napoleon, or with religion as did Mahomet and St Paul, still it is a consolation to those afflicted with this malady to show that epilepsy and genius may coexist, and that the possession of the disease does not necessarily lead to mental and moral degeneration The patient may not reach the highest position among mankind, but under the new dispensation he will not be withheld from any attainment in education, nor prevented from exercising all of his capabilities for his own support and for his own welfare and happiness

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Drs Henry Steadman, W N Bullard and L W Baker in this country, have also contributed to the movement for better care for epileptics, especially in their State of Massachusetts

ABSTRACT OF NOTES ON THE TREATMENT OF EXOPHTHALMIC GOITRE

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY J MADISON TAYLOR, M D

NEUROLOGIST TO THE HARVARD HOSPITAL ASST PHYSICIAN TO INFIRMARY FOR NERVOUS DISEASES PROFESSOR OF DISEASES OF CHILDREN PHILADELPHIA POLYCLINIC, ETC

Dr Taylor takes up the subject of exophthalmic goitre as understood at the present time, reviews its relationship to other vascular disturbances, associated with enlargement of the thyroid, as myxœdema, cretinism and acromegalia He does not see that at present the thyroid physiology warrants any large measure of hope that we shall treat this malady through thyroid juices, as in the case of the other disorders mentioned, and yet promises to explore this field later He confines himself chiefly to the analysis of a number of cases long under his care, some of them for many years, and most of whom are well, summarizing the means through which these were improved The treatment of maladies which demand but little constant supervision, and yet require prolonged watchfulness, is more or less difficult and unsatisfactory because such cases wander away, will not persist in treatment, and from their nature of unhopefulness have a tendency to fall into the hands of other medical men and have their treatment changed, also the exigencies of labor, fatigue, changed surroundings, etc, make it difficult to pursue any consistent plan, even with those inclined to be faithful He takes the ground that this disorder is capable of much more hopeful treatment than is generally thought, that most cases are enormously improved, if rightly handled, that many get well

The question of treatment is chiefly considered from the standpoint of his own experience This consists in

1 Regulated rest, with carefully graduated activities as time and circumstances warrant, systematic measures directed to the upbuilding of the general health, careful attention to nutrition, recognizing the trophic elements in the disorder

2 Careful attention to vascular conditions, which are most noticeably at fault and which demand the most constant treatment This consists of varying measures, regulating vaso-motor activities, as well as loss of nervous force through the easily disturbed nervous balance This is done through attention to the skin from the surface by means of carefully regulated measures from without, and next the re-

view of certain remedies which seem to exert a control over the constant tendency to vaso-motor or neuroses, both superficial and deep

3 To search out constitutional defects and remedy these, eliminate accidental poisons, either diathetic or temporary, eliminate toxines, as of internal sewage poisoning, which has a very direct bearing

4 The regulation of the nervous or emotional balance by careful attention to the habits and environment of the individual, carefully regulating, so far as is possible, the habitual emotional strains and the possible ones, making much of moral teachings to those whose will power and mental equilibrium are gravely at fault constitutionally, and as inevitable entanglements due to months or years of suffering and susceptibilities

5 A careful consideration of such measures as are regarded as specific, as electricity, of which much has been made by many writers, but whose value consists chiefly in the system and encouragement which is thereby exerted over the disordered emotional states

Finally, a summary of the cases under observation when the original paper was written in 1888, the report of a number of others seen since then, and a careful review of the symptomatology and recent means of treatment

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A METHOD OF LOCALIZING POINTS IN THE HEMISPHERICAL GANGLIA

Read in the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY WILLIAM FULLER, M D

GRAND RAPIDS MICH

I will present to the Section the result of my work in the line of the subject given which I think is of value, since it enables one easily and expeditiously to locate any part of the surface or internal structure definitely, and with a precision that can be arrived at in no other way I have hardened a brain with great care so as to maintain the natural shape as nearly as possible The lateral halves were separated in the median line and each embedded in tallow, taking care to place each half in the same positions in the boxes surrounding them Each half was carefully sliced by a gauge so that the slices were three sixteenths of an inch thick and perpendicular to a line in the long axis of the brain, which was seven inches in length, making thus thirty-seven slices of each ganglion The right ganglion was cut three thirty-seconds of an inch behind the left and photographs were taken of the divided surfaces of each slice By this means I have obtained photographs of seventy four vertical transverse cuts of the brain The left side of the picture seen in the album is therefore three thirty-seconds of an inch behind the right, throughout the series which I now present for your inspection

I have here a model which is roughly made to illustrate the principle of localization We will suppose that the slices here represented are equal in thickness, the external markings are faithfully delineated and with photographs of the sections pasted upon the sections, the entire anatomy of any point beneath any portion of the skull can be taken in at a glance To find as near as it is possible any point within the brain, it is only necessary to draw a line from the exterior angular process to the occiput, divide the line into an equal number of spaces with the model, and the slice of the same number on the model will disclose the anatomy of any point on the skull, or direct the position of any point required to be found as well as the relative positions of the internal structures Prints of these photographs properly numbered would, in my opinion, be useful for the delineation of gross lesions of the brain for publication, which would be a means of familiarizing the profession with the anatomy of the brain, and would moreover assist each of us to understand the other Suppose, for instance, that a lesion is delineated upon a certain section definitely localized by a model and extending through a certain number of sections, it appears to me that we could perhaps some time arrive at a just conception of the function of the various parts of the brain There is little interest at present taken in the postmortem appearance of the brain, on account of general ignorance of its anatomy and from an unsatisfactory knowledge of its functions

I have been interested heretofore chiefly in surgery, I have given some attention to the surgery of the brain, and I will take this occasion to rectify a mistake into which the profession has fallen It is accredited to a French surgeon that he was the first to introduce surgery into the treatment of mental defects The fact is, however, that in 1877 I made the first craniectomy for the relief of idiocy, which was published in the *Canada Medical and Surgical Journal*, of January, 1878 I not only operated upon two cases at that time, but also published a paper upon the causes of idiocy and other conditions of feeble mindedness The publication of these cases was widespread, and the operation was ridiculed in both America and Europe in medical journals and by the press If there is any credit in the way of priority in the procedure, it belongs to me, since it was I who was the object of the ridicule I think, however, now as I did then, that the operation is of little benefit to the idiots or to the surgeons either, but that it is suggestive of a fact which may be of the greatest benefit to mankind, by giving material for reflection to the theologist and the educator, and for the instillation of charity into us all When all men are practically convinced that mentality depends upon physical conditions for its manifestation, mental defects will be regarded as diseases of the body now are, proper remedies will be sought, pity will take the place of anger, science will furnish texts the church with all other human things will perish, religion will reign in its stead, and a school system will be established upon reason, our children will then grow up into perfect adults instead of being precipitated into early graves and crowding asylums and prisons as at present ' The peculiar symptoms manifested by disease and postmortem appearances are interesting material with which to educate astute physicians, but it is a sort of cannibalism after all that one should be sacrificed that another may be great It is for us to initiate a revolution in mental sanitation, since those to whom this duty is intrusted are too bigoted to see when facts are plainly presented for their consideration

THE CHAIRMAN—*This* is a matter of very great *interest* I especially commend the practical suggestion *about* making brain examinations The photographs will bear careful examination The *work* shows a great deal of industry and skill on the part of Dr Fuller

Dr H H Donaldson, Chicago University—It was last winter that I first had the opportunity of seeing Dr Fuller's preparations, and I have not seen the one which is here upon the table before Those which I have seen are exquisite casts of preparations from the dissected hemisphere, showing the course of the white fibers and a number of points than which I have never seen any better preparation This is an idea which, I think, has been floating in the minds of a number of people for some time, but it has only been realized as regards the brain by Dr Fuller, so far as I am aware There is a French model which shows an enlargement of the medulla, which has been arranged in somewhat the same way, but the model has been magnified ten diameters and the magnification is in itself a disturbing factor, and there is no doubt that the student and others interested in the state of the central nervous system would be able to derive great advantage from the study of a model of this kind I may add that in the Anthropological Building at the Exposition, Dr Fuller has consented to exhibit a full series of his preparation

The Chairman—I would like to say that these sections have interested me very much, as I have occasion to do some postmortem work in this line from time to time, and it seems to me an admirable way of localizing, and it points out the way of describing the situation even of small lesions and of the beginning and ending of larger lesions, it would be well, I think, if Dr Fuller would publish a careful statement with the accurate reference of certain of these sections to the position on the surface of the brain where they are met Often it is important in describing a lesion of a ganglion and particularly in the interior of the brain to have not only the transverse positions, but also the exact position and extent of the lesions This system should be carried out in three directions, at least, to be perfectly accurate and advantageous, that is, horizontal sections and sections longitudinally and transverse sections These would answer for many purposes Practically the number of sections is too great for book purposes or publication or to suggest as a method of record, and I should think in the sections which include only the ganglia and certain standard sections it would be important to indicate those more thoroughly and definitely It is certainly a valuable method, and with additions, I believe, in the directions which I indicated of taking the sections in different directions and getting the appearances, it would be of great service

Dr Hughes—As far as my knowledge extends, I think that this is the nearest approach to a practical method of teaching students the regional anatomy of the brain extant I never saw any sections or anything in Europe that approximated this in completeness These sections and the models that the doctor makes, which are models of clearness and accuracy, I have found to be exceedingly valuable in the illustration of the anatomy of the brain in connection with my teaching in a large medical college To those of you who have not seen the other models that the doctor makes—some of which were presented last year—I would say that these, in connection with those, enable one to make the essential regional anatomy of the brain so plain to the student that there is no excuse for his failing to have a fair working knowledge of what is necessary in the treatment of brain diseases You will find that with the use of these models the relation of the external and internal capsule and the position of the ventricle, etc, become as familiar as a, b, c, and as plain as the regional anatomy of the liver and spleen

The Chairman—It seems to me that it would be well if the doctor would make the second part of his contribution as a separate note It seems to me to be a note of priority as to the suggestion of the operation of trephining for idiocy, and the secretary will note it in this manner Certainly he should have the credit for this, as it precedes the operations and suggestions of all other surgeons on this subject

Dr Fuller—There is one thing I would like to say, when I started in on this anatomy, I started in to interest myself, but after I went to the American Medical Association last year, there was a gentleman wanted me to see if I could repeat the experiments I went home, repeated them, and I thought I would like the benefit out of these things if I could financially, as it would cost me a great deal of trouble and expense, and I, of course, could not manufacture them myself, but tried to get somebody to do it for me The first thing I was asked was if I could furnish protection I could enlist capital if I could get protection I got a lawyer to send down a couple of sets to Washington, but of course they could not see that it was a work of art and consequently, though I could take out a patent on each piece, which was so expensive a process that I could not stand it, I could otherwise obtain no protection I consider this the same as a book or a work of art, but they could not see it in that light, consequently I have no protection on the preparations I thought if these things could be included as works of art, if we could bring some influence upon them to look at them in that light, I could get these things out in such a manner that everybody could avail themselves of them, but as it is now I can not get any further You will have to do something to help me out of this difficulty

Dr Hughes—What do they call it?

Dr Fuller—They could not call it anything It was innominate It will have to be specially mentioned and brought to their notice by some special request to influence their understanding, and I know I can take out a patent if I desire, but that would be a great deal of expense I find that the intermediary wants about all there is in it, he wants me to work for nothing and himself to charge the profession a big price, so that I am afraid that I will have to get you to assist me in some way to have this so that we can copyright it, or else I will have to keep along in the old way and try to make a living at the practice of medicine I think there is some money in this if it could be fixed in a way so that I could do something with it, and it will be of some benefit to the profession If you could make some recommendation to assist me in getting those things copyrighted instead of patented, I would try to do all I could to present the profession with something so that they could teach students these things easily

The Chairman—I do not see how we could take any steps in this matter

Dr Fuller—Books are copyrighted, I do not see why I could not copyright this

The Chairman—I do not see any reason why it should not be done, but I do not know whether that matter would be helped in any way by any special action of the Association Perhaps it is better at any rate to refer the matter to a committee than to attempt to decide it here Certainly the Association will gladly endorse the creditable character of the work by a resolution if necessary

Dr Fuller—The only way to get at it is to influence the authorities at Washington to give a copyright, the same as they would on a book

The Chairman—I would suggest that this matter should come up under the head of business, then it could be referred to a committee if it is deemed wise on the part of the Association

Dr H H Donaldson—One point connected with the latter matter In case Dr Fuller sees his way clear to carry this matter any further, I think it would be extremely valuable if the two types of brain could be taken, giving model forms of each type, that would be only possible, of course, in case Dr Fuller could realize his ideal in regard to the carrying on of his work

SANITARY MOTES AND BEAMS

Opening Address of the Section on Hygiene, Climatology and Demography, Pan American Medical Congress, by the President

ALBERT L GIHON, A M , M D

MEDICAL DIRECTOR U S NAVY

'And why beholdest thou the mote that is in thy brother's eye, but considerest not the beam that is in thine own eye?"—(St Luke, vi , 41-42)

These words of the Teacher of humanity which "the Beloved Physician" of the first century has recorded, are an appropriate text for the opening address in the important Section with whose conduct I have been charged in this Congress

Time was—and that no long time—when Hygeia, the neglected Cinderella of the medical family, slunk unnoticed among menials Now that she graces the salon her proud sisters caress her and suitors court her favor As an old admirer of this fair mistress whose colors I have worn through youth and manhood, I may be pardoned the personal exultation that I have lived to see her suzeraine

The ascendency of hygiene has greatened and glorified medicine without dimming the luster of any other branch, but though her cult is established, her mission is not ended with the recognition of her supremacy and the faithful following of her own ilk To day she turns to the people and their rulers outside the medical fold and demands the place in their councils that is hers of right A makeshift share in the administration of the sanitary interests of the country has been grudgingly allowed, but the inexorable demands of modern enlightenment can not be satisfied until the conservator of the public health shall sit a peer among the rulers The minister of war may build mighty engines for destruction and defense and muster vast armies and navies, which disease can disperse with a weapon so tiny that the eye can not discern and no mere military expedient antagonize The minister of finance may fill his treasure-houses with gold and silver by the ton, which can buy human souls—honor, virtue, independence—everything but the boon of health, God's free gift to man, through which alone he can be like His own glorious image Commerce, agriculture, manufacture, fishery, mining and all the industrial occupations of the human race, which are now the objects of the intelligent supervision of cabinet ministers, who are grand-masters of political economy and social science, can not thrive without vigor of human blood and brains and brawn, which are the machinery of these occupations, yet until this decade it has not been thought that the intelligent supervision of a grand-master of the divine science of medicine was necessary to preserve this vigorous health of the community, without which even these other ministers can themselves only imperfectly perform their own offices of administration

When I entered the service of the Government of the United States as an officer of the medical department of the navy, nearly forty years ago, with a minimum of experience and a maximum of enthusiasm and an exalted opinion of the dignity and responsibility of my charge, which a lifetime has only intensified, I was astounded at the total ignorance of sanitary provision then prevailing in the naval service Medical officers were curtly reminded that their opinions and advice would be asked when desired, their protests at acts that filled the hospitals and mortuary lists were contemptuously unheeded, they were reproved for officiousness and punished as insubordinate, disabled sailors and marines were discharged and their places and those of the dead were filled without regret or remorse, but with the shameless boast that "if men die we can ship others ," like the Netherland commodore, some of whose crew had been killed by the careless firing of a shotted saluting gun, who accepted the apology for the accident with the nonchalant remark "Dere are plenty more Dutchmens in Holland "

The battle-ships and cruisers of modern navies are not more unlike the brigs and sloops-of-war of forty years ago, than are the cleanly, well fed, comfortably clad and cared for enlisted men, who go on shore daily, subscribe for newspapers and write letters, a different race from the begrimed and degraded "shell-backs," who were ordered to their work with curses and punished with brutality for offenses which neglect and ill-treatment had incited The naval and military establishments have considered the beam in their own eyes, but civil authorities are still purblind to the necessity for organized intelligent sanitary supervision and direction, and grope for succor only under the flash-light of a pestilential visitation

The following from a recent editorial in an influential journal is pertinent

> "Whether cholera has or has not made its appearance at Chester, which is practically one of the suburbs of Philadelphia, it is certain that the conditions reported to exist there are in the highest degree favorable for the introduction and spread of that disease All accounts represent the neighborhood in which the alleged cases occurred as filthy beyond description and occupied by a class of persons who pay no attention whatever to the laws of health or personal cleanliness Of course, the country now has the pleasant assurance that the place is to be thoroughly cleaned and effectively quarantined, but why were not the steps necessary for the protection of the public health taken before the resulting disease, whether cholera or not, had gained such a footing that already five persons had died from it? The time to lock the stable door is before the horses housed therein are stolen, and the way to treat contagious diseases is to prevent their appearance and not wait for them to gain a foothold and then try to stamp them out"

The Secretary-General has announced that the proceedings of this Section and its congener, the Section on Marine Hygiene and Quarantine, will constitute a special feature of this Congress It is, therefore, incumbent upon us before adjourning to declare very positively the opinion of the members of this Section, experienced practical sanitarians from every country of the western hemisphere, that the interests of the public health must be intrusted to a department of the Government especially charged with their administration, with equal, independent, executive authority, as given to other National departments Temporary legislation under the spur of emergencies does not befit this age As the enlightened physician seeks to prevent his charges becoming ill, so should the guardian of the public health be able to forestall those emergencies, whose pecuniary cost in money expended and wasted, in trade paralyzed and diverted, in labor and its wages lost by the sick and terrified and dead, in a single epidemic, exceeds that of maintaining an efficient sanitary service *for the whole country* for a whole year

The fault of the medical profession has always been its lack of bold assertion of its rights, but it can no longer hesitate to declare to trade and commerce and agriculture and manufacture that the health and vigor which are essential to prosperity can not be secured by their own unskilled uninformed efforts They must learn, as the military services have learned, that powerful armies and navies are the result of able and untrammeled medical departments It is as unwise to confide the care of the National health to a financier, however astute, as to expect a postmaster-general to understandingly control a bureau of agriculture, a fishery commissioner to best administer the affairs of the public schools, and an attorney-general to direct the mining industries The health of a nation is a National consideration, involving international cooperation There should be no priority nor clash of sectional interests State lines are not respected by epidemic intruders No State barrier can be so defensive and impenetrable that the toxiferous germ can not pass through The precise form of administration may be left to legislation, the indispensable requisites being that it shall be National, that it shall have parity of voice and influence in the National councils, that it shall have independent executive authority under the limitations common to other departments, and that it shall be intrusted to educated and experienced medical men, who alone are competent to assume its responsibilities [1]

I have not wandered from my text in thus pleading for a National public health establishment Spasmodic tentative provisions in emergencies are nothing but attempts to discover *motes* from abroad, when the *beams* at home should first receive consideration To parallel further and in another sense, the scientific tendency of the day is literally towards *mote-hunting* through microscopes, instead of using our human eyes upon visible abominations The sanitarian, official or amateur, needs but look about him to be appalled at the spectacle of indifference of rich and poor, high and low, to dangers far greater than any from cholera microbes, which confront them every hour, and it may be worth our while to indicate some of these beams in our own eyes, which we complacently refuse to see, while we magnify the motes on our horizon

The preventable disease, which kills more of the human race than cholera and yellow fever together, and in its ordinary slow process of killing lessens the productive power of a community, directly by the enfeeblement of its victims and indirectly by its demands upon members of households and eleemosynary institutions for the care of these chronic invalids—*tuberculosis*—is tolerated with as little concern as the Mongolian exhibits for smallpox, or the Creole for yellow fever or malaria The consumptive whose traits no professional acumen is required to recognize, frequents our crowded thoroughfares, sits beside us in unventilated street cars, and at the hotel table, occupies Pullman sleeping-berths and shares the steamship stateroom, wholly unrestrained and innocently ignorant that he or she may be sowing the seeds of disease among delicate women and children Any one may verify this who uses his eyes for the purpose along the railway and coastwise steamer routes to our invalid resorts Within a twelvemonth, on my way to Mexico by rail, I was fellow passenger with two invalids in the advanced stage of phthisis, en route for San Antonio one of whom occupied the opposite berth, and the other one diagonally across the car, so that I could see and hear them coughing and expectorating, with only such attention as well-intending but unskilled relatives could render They had no vessels for receiving their sputa, which was discharged in their pocket handkerchiefs, to be scattered over pillows, coverlets and blankets They left the car in the morning, and I saw those same berths, it is true with change of linen sheets and pillow-cases, but with no change of blankets, mattresses or pillows, occupied that very night by other travelers, who were thus subjected to contact with a pathogenic microbe far more tenacious of life and power of evil-doing than the dreaded cholera spirillum One has only to sit in a crowded street car on a winter day and watch the clouds of respiratory steam circling from the mouths and nostrils of the unclean and diseased into the mouths and nostrils of the clean and healthy, as the expiratory effort of the one corresponds with the inspiratory act of the other The road is short but straight and sure from vomica and mucous patch to the receptive nidus in another's body Who that has ever had forced upon him an aerial feast of cabbage, onions, garlic, alcohol, tobacco and the gastric effluvia of an old debauché can doubt that aqueous vapor can transport microscopic germs by the same route? Not long ago I traveled by sea from New York to Charleston, and for two nights was cabined with some twenty consumptives going to Florida The air was chill, and they huddled around the stoves and fearfully and fearlessly closed doors and windows, until the atmosphere became stifling with their emanations and the dried sputa, which they ejected on every side It was comparatively easy to escape during the day by staying on deck, and I slept with my stateroom windows wide open, but the curtains, carpets, pillows and mattresses had been saturated by I know not how many expectorating predecessors I have visited fifty smallpox patients a day, have gone through yellow fever wards and stood by cholera bedsides with far less apprehension than I experienced on that trip, yet it was one taken by many thousands of people, who would have been terrified to know that there had been a case of cholera within a mile to leeward of their homes Recall in your several experiences the instances of members of a family, who have occupied the same chamber and bed with a gentle and beloved aunt or sister, and those of tuberculous husbands or wives, who have become ill like them with pulmonary phthisis attributed to everything but the manifest cause

In former years, I preached a crusade against another virulent communicable disease, in the interest especially of innocent and helpless women and children, and for a time I was gratified to find that husbands and fathers began to realize from the numerous indisputable instances I was able to report, that *syphilis* might be, as it had been, contracted from combs and brushes and rough edged drinking vessels in hotels, sleeping cars and boarding houses, from pens, pencils and paint brushes, that had been held between diseased lips, from dirty, old banknotes, from street vendors' toys, from a lover's kiss, a stranger's caress, or a nurse's ministrations Supported by an array of cases of infected children, young girls and elderly men and women, the committee of the American Public Health Association, of which I was chairman, advocated the enactment of a law, placing venereal disease in the category of other communicable affections and punishing its transmission as a misdemeanor, but there were too many of the self-righteous blind to these beams in their eyes, who thought it wiser to seek to exterminate by ignoring its existence and never uttering the name of a disease that has done more harm to mankind than all the diphtheria, typhoid, smallpox, measles and scarlet fever, which are so carefully isolated and their statistics so regularly collected and promulgated—a disease that travels with the missionary to Asia, Africa and the Pacific and decimates bodies faster than he can whiten souls

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[1] These propositions were unanimously adopted in the form of a resolution in these terms by the conjoined Sections on Hygiene Climatology and Demography and Marine Hygiene and Quarantine and reported to the general session of the Congress by which it was referred to the International Executive Committee which returned it with its endorsement and direction that it be transmitted as the view of the Congress to the executives of all the countries represented therein

I do not expect that all who have eyes will see as I do, or having ears hearken to what I say The idle and perverse generation of the first century will have its following in the twentieth, and men and women will continue to do the insanitary things they ought not to do, and leave undone the sanitary precautions they ought to take despite our warning, our imploring, our advice or our denunciation However benevolent and beneficent the hygienist's aim, this unappreciated, unrequited and often unprofitable labor is enough to deter him from what has been derisively described as only an effort to procure the survival of the unfit—and thus thwart Nature's own attempt to rid the world of them He encounters another obstacle to success as aggravating as the disbelief in the necessity for his work The authorities listen to his warnings and then employ their own perfunctory and superficial methods of protection Told that absolute cleanliness is the fundamental fact of sanitation, street-cleaners are set at work brushing the surface dirt into little heaps, which passing vehicles again distribute or the winds carry into the opened windows of adjacent residences The refuse of the household is deposited in vessels on the sidewalks of crowded thoroughfares to be emptied after a time into collecting carts, from which clouds of dust envelop passers and circulate back into the houses—*living* dust, for Manfredi found an average of 761,521,000 microbes to the gram of the street dirt of Naples, from which he cultivated pus, malignant œdema, tetanus, tubercle and septicemia Swarms of flies feed on the decomposing contents of exposed garden pans and buckets and carry their tiny germ laden booty into the butcher shop of the poor and the kitchen of the millionaire Who can dispute that if the hair of the Newfoundland dog could transport yellow fever to a distant Mississippi town, and a newspaper printed in an Ohio village where smallpox was raging, could fatally infect a United States Consul in a foreign port where the disease did not exist, that a cloud of dirt, a swarm of flies, or a single fly, as Sawtschenko, Simonds and Steinberg demonstrate, can disseminate cholera and become a focus of infection, which ordinary precaution to cover and destroy the discharges and excreta of those already sick would have made impossible? Cities are reported clean whose sanitary inspectors have merely walked through crowded tenements, a hundred or more a day, and been satisfied with external evidences of brush and broom, leaving carpets and rugs unlifted, pieces of heavy furniture, with the fluff of years behind and beneath, unmoved, and closets, cupboards, pantries, storerooms, attics and cellars undisturbed The cellars of our great cities, and I speak with personal knowledge of many in New York, Brooklyn and Philadelphia, are greater abomination than even filthy living apartments

The *New York Herald* of the 8th August, narrating the death of two children by falling from a window on the fourth floor of a tenement house at 204 West 61st Street, said "To get at the bodies of her children the frantic mother had to go through the cellar of the house There she waded through indescribable filth, almost knee deep to where her children lay, when the foul odors overcame her and she fainted" It added "The sanitary superintendent issued an order that the cellar must be cleaned out within twenty-four hours" Do you believe that it was the only one of its kind that needed cleaning? No city can be accounted clean until its ordinances require every cellar door to be widely opened to the sun and air—that royal pair of germicides—every cellar to be emptied of its refuse, every cellar wall and ceiling to be scraped and whitewashed, every cellar floor to be taken up if rotted and sprinkled with lime if uncovered, a tedious and expensive process, but effective sanitation, costly as it must needs be, is cheap beside the outlay of a single epidemic There are underground foulnesses in all our great cities, of which they should be rid at any cost, as where rag-pickers and bone gatherers collect their filthy stores, and Italian street-corner fruit sellers keep their decomposing bananas, grapes and oranges, till rubbed off by dirty pocket handkerchiefs they are exposed for sale, glistening after their repulsive polish with impure saliva If some mote hunter, loth to find so huge a beam, chooses to find solace in disbelief, I might be able to shock him by declaring that I have seen the figs he munches unconcernedly, flattened in their pretty boxes in a country where syphilis reigns, by questionable thumbs moistened by equally suspicious saliva Shall I, while revealing insanitary horrors, dare lift the sweeping train of the fair promenader, fashioned after that of women in other countries who never walk upon the streets, and show the nasty mess of spittle, excreta, mud and dust she gathers from the sidewalks upon her white skirts and silk stockings? She will not believe me, but the bacteriologist, who scoops the mud from between the cobble stones of the streets to find it swarming with microscopic life, can gather as rich a harvest of microbes from these same dainty undergarments

Nor are these the only beams we overlook in our search for motes Dr Graham, bacteriologist of Starling Medical College, in response to an official inquiry by a member of Congress, reported that he was able to obtain thirteen colonies of two kinds of bacteria from one dirty, worn banknote, and the *Medical Record* of 21st of January of this year, states that a British bacteriologist discovered 19,000 microbes, including those of tuberculosis, diphtheria and scarlatina vegetating upon a single note

Other harborers of morbific germs are the textile fabrics employed in the furnishing of street cars and stages, which the chairman of the Sanitary Committee of the New York Board of Health reports as "a menace to public health by reason of their continual exposure to uncleanness and infection from the clothing of diseased and filthy passengers," which, like their grimy bodies, may be foul with the sputa of diphtheria, tuberculosis or syphilis, the desquamations of scarlatina, measles or erysipelas, the emanations of typhus or the alvine discharges of cholera or dysentery A commendable league of zealous ladies, who are seeking to prevent the abominable practice of expectorating in public vehicles, induced a few car companies to display placards, to the effect that "gentlemen are requested not to spit on the floors," but these appeals intended for beasts, who were never gentlemen, were hung in inconspicuous places or covered by other notices, and the spitters continued to discharge their syphilitic and tubercular sputa on the floor mats to be taken on ladies' petticoats and carried to their homes The spitter and the other beast, who voids his nasal secretions where it suits him, are largely responsible for the spread of influenza, for, according to Pfeiffer, the discoverer of its bacillus, "its contagion is found in the moist secretions of acute cases in the discharges from the nasal and bronchial mucous membranes"

Further detail would be out of place in an introductory address to this Section Let it suffice to point to the fragile spirillum of cholera, which we are exorcising by "bell, book and candle" as illustrating the dreadful *motes* of my text, and to the sturdy robust bacillus of tubercle as the *beam* we will not consider "Cholera," says Ernest Hart, "can only be drunk and eaten It can not be caught and breathed," but the tubercular mischief maker, who finds the ever open door of the respiratory passages his readiest approach, may also enter at any or all the orifices of the body Among one thousand autopsies, Osler found 275 with tuberculosis, among 8,873 patients in the surgical clinic at Wurzburg, one seventh (1,227) were tuberculous, the necroscopic statistics of Harris and others "show that one-third, perhaps over one-half, of the people who live to middle age, have some form of tubercular infection, and Dr Williams of Johns Hopkins' Hospital estimates that tuberculosis of the female generative organs is four times more frequent than generally supposed" (*Medical Record*, March 18) Can any more obvious method of direct infection in these cases be imagined than the trailing skirts of women gathering tubercular sputa from the pavements?

The sanitary inspector is destined to become the most important agent of future civic administration The perfunctory burning of a pan of sulphur in a diphtheritic chamber, the sprinkling here and there of a solution of corrosive sublimate, or the substitution of the sweeter scent of thymol, pinol or some newer "ol" for the foul odor of the privy will not then be the tolerated limit of this interference All that science teaches and all that intelligence can devise will be exacted of him A sanitary inspection will be a deliberate, painstaking, critical examination of nooks and corners and their disinfection, the flooding of the lairs of microscopic motes and the deluging of unsightly beams with those unstoppled, unpatented, inexhaustible germicides, air and sunshine

Coincident with the approaching Eleventh International Medical Congress at Rome and its fitting complement, there is to be an Exposition of Medicine and Hygiene, and significant of the share accorded sanitary science in a Medical Congress representing the highest modern professional attainment, it will be noticed that of the *ten* classes which in their ensemble make up the Exposition, *five* are exclusively hygienic, to-wit

4 Plans, models and *materiel* bearing on school management and sanitary civic organization (*riordinamento urbano*)

6 Plans models and *materiel* for hygienic constructions

7 Apparatus and furniture for hygienic uses in the interior of common dwelling houses and public offices on every scale

8 *Materiel* appliances and accommodations for the practice of personal hygiene, and

9 Plans, models and appliances for the hygiene of the working classes

Three are partly hygienic, to-wit

1 Apparatus, *materiel* and plans of buildings for scientific and technical investigation in therapeutics, biology and hygiene

3 Articles and appurtenances requisite in salvage service and in *assistance publique*, and

10 Books, atlases, photographs and such like, recently published and having reference to the medical, biologic and hygienic sciences

Two only of the ten are exclusively medical and surgical, to-wit

2 Apparatus, instruments and *matériel thérapeutique* in the various departments of medicine, and

5 Plans, apparatus and furniture for the purposes of the divisional surgeon in cities Additional to these, special classes are devoted to hydrology and balneo-therapy, and to the Italian Red Cross Society, both of which are practical outcomes of sanitary endeavor

I do not forget that climatology and demography, as well as hygiene, are within the purview of this Section, but what are climatology and climato-therapy but applied hygiene, and what demography but the demonstration of the results among masses of people of sanitary or unsanitary conditions? The climatologist is of necessity a hygiologist The materia medica and pharmacopœia are not his text-books Physical geography, meteorology, hydrology, balneology are his scriptures and gospels The vivifying light, invigorating air and healing springs and waters his armamenta, his anodynes and hypnotics, his roborants and entrophics, his alterants and excernents The high professional standing of the American Climatological Association, one of the constituent bodies of the Congress of American Physicians and Surgeons, and the distinguished climatologists who are with us to-day and who are conspicuous in every International Congress of Hygiene, are evidences of the place in medicine of climato-therapy, the practical end of medical climatology, that broad specialty which robs so many graves of untimely victims and makes so many heretofore without hope able, if not to take up their beds, at least to get out of them, and walk The field of the climatologist is broad as the habitable surface of the globe—in the high altitudes of Colorado and the Alps, in the odorous pine forests of Norway and the Carolinas, on the sea shore or upon the wide waste of waters and their islet oases swept by ocean breezes

Our American vital statistics are not yet piled high enough to form the foundation for a substantial superstructure of demography The great caldron in which we are mixing Celts and Saxons, Semites and Aryans, with a seasoning of syphilis, tuberculosis and insanity, is simmering, with what ultimate homogeneity can only be conjectured When immigration was a tiny stream, however muddy and noisome, poured into a rapid river of pure water, it was soon lost in the crystal fluid, but now that huge sewers are discharging their fetid pestilential torrents into a placid lake that has no outlet, the lake itself becomes turbid and unclean Already, in the *cul-de-sacs* which are nearest the open mouths of these foul sewers and receive their floating scum—the prisons, reformatories, almshouses, insane asylums and hospitals—this filthy, debased and diseased foreign element is ascendant, and our demographers have a simple task in representing its volume by numerical statistics Dr Frederick H Wines, the distinguished compiler of this portion of the census of the United States for 1890, demonstrates by the indisputable evidence of figures that while the foreign born constitute only 17 per centum of our total white population, in round numbers about one-sixth, yet they furnish over one-half of all the paupers in the almshouses of the country It is evident that the traits of the Saxon are disappearing from our National complexion, and if the proper solution of the negro question be, as suggested by certain prominent Afro-Americans, to bleach it out by admixture, we may expect the hue of our descendants to be decidedly tawny

The most zealous demographers of this decade are the French, who have been spurred in their statistical researches to discover the causes of the too evident depopulation of France of its native races But are we not again refusing to consider the beam in our own eyes in not giving heed to the operation of similar conditions in our own country? Dr Billings announces that our birth rate has fallen from thirty-six per thousand inhabitants in 1880 to thirty-one per thousand in 1890 The twenty to thirty children of our ancestors, the dozen or more of our great-grandmothers, have dwindled progressively to five or six, then to three or four, until to day one or two or none represent the fecundity of the educated classes The *Independent*, referring to New England Puritan life, says

> "Large families abounded According to Cotton Mather' one woman had twenty-two children, another twenty-three by one husband, and a third was mother to seven and twenty Sir William Phipps was one of twenty six children of the same mother Printer Green had thirty The Reverend John Sherman of Watertown had twenty-six children by two wives, the second spouse the mother of twenty The Reverend Samuel Willard, the first minister of Groton, had twenty children, being himself one of seventeen, as was Benjamin Franklin"

The paragraphist who can now record the case of the woman of 31 at Cold Spring who has become the mother of seventeen children in nine years, or that of the Georgia matron of 25 who rejoices in thirteen, has, in newspaper parlance, "a great find" The spectacle of impending maternity among our better classes is becoming more and more rare, and still more rare that of an infant nursing at its mother's breast Only in the squalid quarters and purlieus of our great cities where the English language is not spoken among imported lazzaroni and the overflow of Italian ghettos, does the process of human incubation go on as God and Nature intended The laws of creation are immutable, and one has but to look beneath the disfigurement of female dress to recognize the evidences of imperfect physical development—in stooping unsymmetrical shoulders, in meager limbs, in narrow pelves and flattened busts Dr Dr Otis exhibited at the recent meeting of the American Climatological Association in illustration of the diametric measurements of the thorax, the profiles of a number of female chests which were supposed to be those of little girls until he explained that they were the contours of nubile young women in Boston normal schools, like her whom Solomon bewails in the Song of Songs "We have a little sister and she hath no breasts what shall we do for our little sister in the time when she shall be spoken for?" My friend, Dr Robert T Morris of New York, has called attention to the fact that eighty per centum of all Aryan-American women have rudimentary clitorides and asks if evolution is trying to do away with this organ in the degenerative changes characteristic of highly civilized varieties of the *homo sapiens*, of which early falling hair, decaying teeth, weak mammary glands and badly balanced eye muscles are other examples Is the sexual instinct losing its potency as a maternal factor? Is marriage only a social office for the display of finery on the bride and bridesmaids and the entertainment of crowds of gaping strangers? Is the virgin wife best prepared for conception by months of preliminary sur-excitation and feverish anxiety, and is a fatiguing railroad journey the best prelude to an act which should lead to the inception of a human being, the incarnation of a human soul? Has the function of reproduction come to be regarded only as a bestial concomitant of matrimony, and lactation its vulgar indecent supplement, and is all this attributable to physical deterioration shown by the undeveloped or imprisoned *mentula muliebris* and atrophied mammæ, and how far is this the explanation of the diminished fecundity of the Aryan-American woman? These are problems as interesting to our demographers as the depopulation of France, the disappearance of South Sea Islanders, the migration of Semitic and Mongolian races, and the effects of mal-nutrition on the indigenes of Ireland and Russia

But, gentlemen, I shall no longer trench upon time that belongs to you I am highly gratified at your presence and thank you most cordially for your kind attention

NOTE —The remainder of the address was delivered in Spanish, of which the following is a translation

Gentlemen our Friends and Colleagues from Abroad —Permit me on the part of the members of this Section from the United States of America to tender you a most hearty welcome to our capital Your long travel to this city bespeaks your interest in the occasion It is no light boast that here for the first time in its history the medical profession of all America finds itself united in one great Congress It was about nine years ago that a number of Canadian sanitarians claimed the right as Americans to become members of the American Public Health Association and it was my privilege as president of that body to receive them as such. The subsequent transactions of that Association show how loyal they have been to its traditions, how zealously they have participated in its work and with what dignity they have filled its highest offices Two years later they carried the Association into their own territory at Toronto

In 1890 two distinguished representatives of the Supreme Council of Health of our sister republic of Mexico came to Charleston and as Americans, likewise knocked at the door of the American Public Health Association, returning the following year in such numbers and with such a hearty welcome from their government to meet in their own capital that the invitation was accepted and the most successful meeting of the Association, the twentieth in its history, was held in the ancient city of the Toltecs To day the roll of States represented in the Advisory Council shows Illinois Massachusetts and Tennessee Ontario, Quebec and Manitoba Guanajuato Querétaro and Zacatecas in one fraternal union

What sanitarians have done in that Association which bears the escutcheons of its three constituent countries, side by side this Congress aims to accomplish for the whole profession of medicine in the Western Hemisphere, uniting its members in one brotherhood, whatever their race or language and whether their homes be *on the frozen* shores of the Arctic or the hillsides of Tierra del Fuego among Greenland's icy mountains in the archipelago of the West Indies or amid the perennial gardens of Hawaii

Physicians and brothers from the United States of All America welcome to this your capital which in that sweetest language spoken by human tongues, *pongamos á nuestra disposicion*

Medico-legal Photography —One of the recent inventions in photographic science is exhibited *in the French building* at the World's Fair It consists of a reversible camera, with a special tripod enabling the operator to photograph a corpse and the surrounding area of ground in the proper perspective to an extent of about eight feet square The tripod is placed over the object and focusing is obtained by means of a mirror at the back of the camera with an angle of 45 degrees By this method the condition of the ground and contiguous objects in their most minute details are fixed upon the sensitized plate

CHOLERA, ITS NATURE AND ITS CURE

BY HENRY RAYMOND ROGERS, M D
DUNKIRK N Y

"We have no better means of combating the cholera to day than at any time since it became known to civilization, a thousand years ago," said a distinguished physician in a recent number of the *Review of Reviews* The medical profession therefore stands confronted with the appalling fact that hitherto all theories of this disease have been so misleading, and all forms of treatment have proved so worthless, that longer to trust them would be little less than criminal Better theories and practice are urgently demanded

The bacillus theory of Dr Robert Koch, which was so eagerly grasped at, is now found to be fallacious Dr Koch himself admits that comma shaped germs are found in the common diarrheas of summer everywhere, and he tells us "Water, from whatever source, very frequently, not to say invariably, contains comma-shaped organisms" He is not ignorant of the fact that these bacilli are found in the secretions of the mouth and throat of healthy persons and in the dejections of hardened fecal matters Dr Koch also knows full well that Drs Pettenkofer of Munich, and Emmerich of Berlin, two of the most distinguished members of the medical profession of to day, and experts in this disease, drank each a cubic centimeter of "*culture broth*" containing these pathogenic bacilli without experiencing a single characteristic symptom of cholera, though the draught in each case was followed by liquid stools swarming with these germs Hasterlik reports six cases of the same kind without any apparent results The utter worthlessness of Dr Koch's comma bacillus as diagnostic evidence of this disease is thus fully demonstrated

As the result of a personal experience in every epidemic of this disease in our country since 1851, together with an experience of its effects upon my own person, and a success in its treatment quite phenomenal, I am prepared to assert that cholera need be no longer the dread and scourge which hitherto it has been

It is strange that a new philosophy of this disease which must revolutionize its theories and its treatment is now found where it never before has been sought for, but where alone it is possible to find it, viz in the right interpretation of the symptoms which characterize the disease This philosophy not only reveals the essential nature of this disease, but points unerringly to a more successful treatment

The symptom of most vital importance, and the only one which is pathognomonic, is the watery exudations which find their way so profusely through stomach and intestines and skin In fact, all other symptoms which follow this one have their origin *in it*, since, in the entire absence of *this*, neither of the others can have an existence The most vital consequences, therefore, depend upon the right appreciation of this symptom, together with the promptness and efficiency with which its indications for treatment are carried out This watery element is constituted of the serous element of the blood, and comes from every part and portion of the system

The question now arises, by what process does this rapid separation of the finer element of the blood from the coarser take place? The nerves of the system, when in their normal condition, preside over and maintain the tonicity of every organ, vessel and tissue of the body They control the functions and processes of every part The rapid filtration of the watery element of the blood through the now loose and patulous walls of the blood vessels indicates a loss of tonicity on the part of the nerves which permeate those walls On account of such weakened condition of the walls of the blood vessels a general serous outflow pours from every vein and venule of the body, and the great life current is thus robbed to supply these so-called rice water discharges At the same time the weakened vessel-walls contract with diminished force upon their remaining contents, and consequently the brain and heart fail of an adequate supply, and the more fatal symptoms and death follow Such is the secret of the disease and its rapid and phenomenal fatality

The rapid abstraction of a single element of the blood becomes disastrous in the same manner as when the full blood itself is lost in the more common forms of hemorrhage It is, therefore, passing strange that this rice water phenomenon never has been recognized as a hemorrhage, with all that such a hemorrhage implies All symptoms and conditions incident to this disease, as also the changes observed upon the cadaver, are explainable upon the hypothesis of actual hemorrhage, and we are warranted in saying, *only* upon that hypothesis

Owing to the failure to discriminate between the actions of the red corpuscles of the blood and its white discs, its chief constituents, this hemorrhage hypothesis has not been applied in explanation of this disease The vital forces of the system depend largely upon the action of the red corpuscles, for through these chiefly are effected the oxygenation of the blood and the consequent revitalization of the system A small loss of this element may become quickly fatal On the other hand, the serum or white element which constitutes the bulk of the blood performs less vital functions, and its abstraction becomes neither so quickly nor so seriously manifest. In this disease enormous quantities are sometimes separated from the circulating current without fatal consequences

Treatment —Since the disease is essentially a neurosis, and its controlling symptom a hemorrhage, its treatment becomes at once clearly defined, and the pure empiricism of the past must give place to a scientific treatment with vastly improved results We must look upon the cholera hemorrhage as subject to the same general principles of treatment as other hemorrhages

As the cholera hemorrhage occurs over so large a portion of the body, is colorless, and therefore virtually a *concealed* hemorrhage with all that is alarming which that word implies, it calls for attentions at once prompt, efficient and watchful No painless diarrhea or painless vomiting is free from danger during a cholera epidemic, since the milder conditions of the disease often quickly change to those more grave and fatal

Both the principles and the practice of medical science teach that position, *position*, POSITION, is the prime safeguard in sudden and profuse hemorrhages occurring from any cause In the treatment of cholera hemorrhage, position with the body horizontal or with the head the lowest, is quite as indispensable as in that arising from any other cause

Position in the treatment of cholera is not simply a repose in bed with the head resting comfortably upon the pillow, and raised or lowered at the pleasure or caprice of the patient, but to be efficacious, as in its graver cases, it must be *compulsory*, and strictly maintained, *as for the very life*, until the danger period is passed The vital necessity of position in the treatment of cholera is shown by Murray, Cunningham and other distinguished authorities when they tell us that "once sitting upright in bed sometimes causes death in this disease" Not even in the act of evacuation of the bowels should the head be raised in the more serious cases But position in this disease is sometimes difficult to secure, as the patient, when weakened by exhaustive discharges and pain, becomes disturbed in intellect and is with difficulty controlled

If the best results are sought for, the horizontal position should be enforced in every case of even suspected cholera In cases of great danger the body should be inclined with the head the lowest This position should be maintained until the blood vessels contract upon their contents, which fact is shown by an improved condition of the pulse

In the present condition of medical science, opium and its preparations stand far above other remedies which may be employed in the treatment of this disease No remedy is known which surpasses this one in the power to change the perturbed condition of the nervous system and close up the diminutive avenues through which the watery element of the blood and the life ebb away together During an epidemic it is hazardous to rely upon remedies taken through the mouth, since in cholera the action of the mucous membrane often becomes changed, so that internal remedies either fail to act or are ejected Moments are sometimes precious, as a life may depend upon the certainty of retention of a remedy and the promptness and efficiency with which it may act The hypodermic method is here our best resource According to the reports of cases in Asia, Australia and elsewhere, the hypodermic use of morphia has shown almost uniformly favorable results, the one-eighth to the one-sixth of a grain of the latter very rarely need be exceeded or frequently repeated Opium and morphia *in large doses* are decidedly contra indicated *in any of its stages,* since, if these drugs are retained in the stomach, they may become cumulative and in the case of reaction they might become fatal

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En résumé This disease, so destructive to human life, is thus found to be most simple in its character and positive in its indications for treatment As a problem in medical science, cholera resolves itself into a question of supply of blood to the brain and heart If this supply be kept up, a fatal termination to this disease is not probable Whatever course will best promote this end, therefore, must secure the most favorable results in its treatment

The inestimable value of *position* as the fundamental idea in the treatment of cholera was first exemplified upon my own person in 1854, and has been abundantly demonstrated in the epidemics which have since occurred

The simple theory herein advanced is found in entire harmony with the highest principles and practice of the advanced medical science of to day It offers results such as never yet have been realized, and places within the reach of all a ready method of treatment This treatment may be successfully employed even without the use of medicines

In fine, in the light of the study of this disease during forty years, both at home and abroad, such as few have had either the opportunity or the inclination to pursue, and in view of the phenomenally favorable results of treatment based upon this philosophy, I believe myself fully warranted in asserting that the rate of mortality of this scourge may be reduced to less than half of that at which it confessedly stands to-day

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In 1888, when at Fort Bodo, Stanley fell ill of sub-acute gastritis, he pulled him through After this he insisted upon accompanying Stanley to the Nyanza In the following year Dr Parke was himself stricken down But while suffering from fever he arose from his sick bed to minister to other invalids When Emin Pasha was found and met with his accident, Dr Parke attended him successfully

It is told of Dr Parke that when he found Lieutenant Stairs wounded by the poisoned arrow shot by the hostile natives of the Aruwimi forest, he sucked the poison from the wound

Stanley, in his work "In Darkest Africa," gives high praise to Dr Parke for his invaluable services and his fine character

Dr William Thomas White, editor for many years of the *New York Medical Register*, died September 17, 1893 He was born in Richmond, Maine, in July, 1829 He was a graduate of the New York Medical College in 1855, being a protegé and afterwards assistant to that other distinguished Maine man, the late Dr E R Peaslee He served as house surgeon to the Ward's Island hospitals for a time, going thence to the Isthmus of Panama as surgeon to the railroad He returned to New York after an absence of eight or nine years and at once identified himself with the Academy of Medicine, the American Medical Association and others of the best organizations He was secretary of the Academy, five years later, serving in that capacity for eight years He was an ex president of the Medico-Historical Society and Medical Association of New York County His positions on the staff of the Demilt Dispensary of the Presbyterian Hospital of Charity on Blackwell's Island and of the Veterinary Surgeons College, were well and honorably administered, and some of them were held down to the time of his demise Dr White's membership in the American Medical Association dates from 1866 He was one of the charter members of the great New York State Medical Association, now grown to a membership of 800, and the success of the body was very near his heart The cause of his death was referable to cardiac hypertrophy and its sequelæ

Dr Seth Rogers of Pomfret, Conn, died Aug 6, aged 70 years He was the twelfth son of a Vermont farmer and won his way into the medical profession by dint of perseverance, as well as a conflict with disabling ill health He was a man of Quaker parentage and an anti-slavery advocate before the breaking out of the war In 1862, he took the office of surgeon to a colored regiment organized by Col Thomas W Higginson, the First South Carolina Volunteers His medical education was partly obtained at the New York University and partly at the Castleton school He also studied for a time in Paris under Trousseau and Valleix He visited South America in 1858 for the sake of his health Worcester, Mass, was his home during the earlier years of his career In 1863, he was obliged by illness to leave the army, and he went to Pomfret in order to follow an outdoor life on a farm He was able to establish a winter practice in Florida for a dozen years, and cared for patients at his own house in Pomfret during the summer months Although his life was one long conflict with the *res augusta domi* and with ill health, he was a character of so much vitality and courage that he has left a record bright with honorable accomplishment

Dudley S Brainard, died at Osage, Iowa, Saturday, Sept 9, 1893 Dr Brainard was born in Williamsburg, N Y, now a part of Brooklyn, Jan 3, 1851, and came to Wisconsin with his parents in 1861 six years later they removed to Zumbrota, Minn He received his medical education at the University of Buffalo, N Y, graduating Feb 23, 1875 After practicing a short time in Minnesota and Wisconsin he removed in 1879 to Stacyville, Iowa, where he resided until a short time before his death

Dr Brainard prized his profession highly and was regarded as one of the strongest men in regular medicine in Northern Iowa At the time of his death he was a member in good standing in the county, State and American Medical Associations He was a faithful attendant at the meetings of these societies contributing frequently papers, which were listened to with interest

Dr Brainard was married in 1876, and his estimable wife and two children survive him

His memory will long be held in loving esteem among those who knew him as a faithful physician, a loyal friend, a noble man, and a Christian

Dr Edwin N Colt of Brooklyn, died on the 15th inst, after a period of sixty years of almost uninterrupted family practice He was the *doyen* of the medical faculty of his town, and it is said that there are only two survivors in New York State whose dates of graduation antedated that of Dr Colt He was a native of Berkshire County, Mass, having been born there on August 7, 1811 He was a graduate of the old Berkshire school in the year 1832 He was highly honored by the community in which he lived

Dr Philemon Hommell of Jersey City died suddenly September 14, aged 57 years He was an Alsatian by birth and a Parisian by education He studied pharmacy at Paris and became the pharmacist to the Hôtel Dieu, following his father and grandfather in the first choice of a profession Having come to America, circumstances led him to study medicine and about 1882 he obtained his doctorate He was successful in practice, and at the time of his death was a visiting physician to the Jersey City Hospital His death was due to pulmonary hemorrhage

Dr Austin K Gould of Worcester, Mass, died Sept 9, aged 67 He was in the volunteer medical corps during the war of the rebellion as surgeon

He was placed in charge of one of the division hospitals at Wilderness Run Here he was captured by the confederates and for nine months languished in the prisons of Andersonville, Florence and Charleston

In the latter place he was for nine days under a continual fire from the Union batteries

Prof Lyman Bartlett How, M D, of Manchester, died in Hanover, N H, Sept 15 of consumption He graduated from Dartmouth in 1860, and from the medical department in 1863 He had been Professor of Anatomy at Dartmouth for twenty-five years, and held the place until this year, when failing health compelled him to give it up Dr How was 55 years old, and leaves a widow and two children

Dr Horatio Nelson Page of Chelsea, Mass, aged 87 years died on the 16th at the residence of his son-in-law, Charles E Reed, in Milwaukee Dr Page was well known in the East, having practiced at Chelsea and Bangor, Me, for many years

Dr Joel Henry Cooper, father of Congressman H A Cooper died at his home in Burlington, Vt, aged 70 years He was born in Windsor County, Vt, and went to Burlington in 1845, practicing medicine until his retirement about ten years ago

Dr W H Galt, health officer of the city of Louisville for the last twelve years, died suddenly Sept 14, of "blood poisoning" He was 66 years of age and one of the best known physicians in the State

Dr E F Long, past grand master-at-arms of the Knights of Pythias of Wisconsin, died Sept 8, at his home in Black River Falls, Wis, after a prolonged illness

Dr Frank W Brown, of 51 Eliot Street, Detroit, Mich, died Sept 9 He was a son-in-law of the late John J Bagley and his father was a physician of that city

Dr William P Buck, who was surgeon of the old Eighth Illinois Infantry during the war, died Sept 15 at his home at Mowequa, Ill

Dr Abram Simmons of Cohoes, N Y, died at that city on the 12th

Dr John L Galliver of Toledo, died Sept 18, 1893

Dr Edward Warren Bey of Paris, died in that city Sept 16

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.
SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES 10 CENTS.
Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE., CHICAGO, ILLINOIS.
All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues and subscription for THE JOURNAL. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly.

SATURDAY, SEPTEMBER 30, 1893.

THE SEASON OF THE STUDENT.

Let those study who never studied before.
Let those who always studied, now study the more.

The annual pilgrimage of the medical students has commenced; some returning from summer semester with renewed health and vigor, others fresh from academy in pursuit of a new branch of science, and all classes full of enthusiasm and bold resolve. The dingy old college looks well to these youths, for in its walls are stored the paraphernalia of the amphitheater, the laboratory and the clinique. Even the musty jokes of the professors seem to have penetrated the cracks and crevices about the lecture rooms, which seem to be smiling softly to themselves as the eye of the neophyte rests upon them.

But no one better than the medical student, knows that there is a serious side to his life. He may have a rollicking, devil may-care expression at the beginning of the term, but he knows that there are pains and penalties as well as prizes on examination days, and the former are as two to one.

The student has changed from the days of fifty years ago. Then, as a rule, he forsook the plow to follow a preceptor for six months immediately preceding the opening of the college term. He kept calls, studied anatomy in a desultory way, and occasionally assisted his preceptor in important cases. He then came to college with a fair knowledge of the routine life he intended to lead, he listened to many daily orations through the allotted period, and in a very short time received the engrossed parchment that authorized him to respectively save or slay according to his ability on the one hand, or blundering propensities on the other. Those days have passed for the American student; he may have less native keenness than his predecessor, but he has vastly more collateral knowledge. He is compelled to show evidence of previous academical study upon entrance, and there is a strong probability that should he cut the recitation room, he will be necessarily absent on Commencement Day.

The pedagogue, too, has changed with the times; he no longer cultivates oratory, but the details of the branch intrusted to him; his speech is seldom studied, but his ideas are those born of intimate study of the subject in hand, and more than that, the fruit of a greater experience than that of his predecessors. The great increase in population has multiplied hospitals and dispensaries, until there is now little lack of opportunity for study of actual cases of any particular affection. The scientific pedagogue endeavors to allure and attract the students by class experiments and demonstrations. These have taken the place of the anecdotes that were used by all the old time professors. Our student must have his knowledge completely digested by the end of the term, so thoroughly mixed and incorporated into himself that it is his own. If he disgorges it whole, in the examination room, he will be through life a mental dyspeptic. The thorough assimilation of the knowledge poured into him also stimulates originality. "Bees," says MONTAIGNE, "cull their several sweets from this flower and that blossom, here and there where they find them, but afterwards themselves make the honey, which is all and purely their own, and no longer thyme and marjory." The modern method of teaching seeks to instil in the mind of the student the general principles of sincerity of purpose, attention to the lecturers and demonstrators; and a true student will learn modesty from the history of the art. The student also soon learns that cultivated eccentricities of manner and speech are no longer a passport to the highest standing in his class. He will gain much from the diversity of opinions he may hear expressed in the lecture rooms, and if he be wise he will follow the opinions that seem founded on reason. He will remember that the Republic of letters is a Republic and not a kingdom; for there is no king. He only commands who has reason on his side.

Few departments of the medical college are more useful than the quiz, which is not only invaluable to the student, but is made use of by the instructor to gauge the capacity of his pupils; as a young horse is brought out and exercised by his trainer, that the one may be made faster and stronger by exercise, and the other may know his gait, speed and peculiarities. But the quiz master should be entertaining and engaging in manner; the quiz "driver" is an unmitigated nuisance.

The student, to be successful, must avoid excesses, keep healthy and pay due attention to exercise while storing his mind; remembering the saying of PLATO that one must form not only a mind, and not only a body, but both a mind and a body, to become a MAN.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION

No greater evidence of the altered position of electricity as a remedial agent need be sought than the character of the attendance and discussions at the recent meeting of the Association in Chicago The interested participants seemed equally divided between those who were avowed specialists of National reputation and those whose standpoint was that of the general practitioner, and it was easy to see that both the speakers and hearers appreciated the educational value of the occasion The two days' discussion on the character of coils, induced currents, and the new sinusoidal currents produced by specially constructed dynamos, and as well the discussion on fibroid tumors and individual papers showed scientific qualities unsurpassed in any other National organization It showed also that such technical, though practical, subjects could not be adequately considered in any other medical organization than one devoted to electro therapeutics or in a special section of our own great ASSOCIATION

The organization of this Association was due to the combined labors of BETTON MASSEY, GOELET and WM JAMES MORTON, names all standing for what is best in the newer electro-therapeutics To them the profession are indebted for this most important step in the rescue of electro-therapeutics from empiricism and the ascertainment of a scientific basis for its claims

Blatant quackery had already been relegated to as quiescent a position as the ever-gullible public will permit, but the work cut out for an association devoted to medical electricity was even more difficult, it was the rescue of the remedy from the hands of its avowed friends—men who intrusted a noble agency to unskilled assistants and nurses REMAK, ERB and DUCHENNE DE BOULOGNE builded well the foundation of modern electro-therapeutics, but so much can not said for CHARCOT, who, great as he was, was responsible for a school of "impressionists" largely recruited among French and American neurologists, whose influence was distinctly inimical to scientific electro-therapeutics

To APOSTOLI is due the modern revival of the physical methods of ERB, and as the field of their application now invaded gynecology and other departments capable of direct study and materialistic demonstration, it became finally possible for the questions involved to be discussed by believers in mere natural phenomena rather than mysticists

As physical questions, involving the application of measured quantities and known qualities of an important force of nature, the subjects discussed at the three meetings of the Association have proved themselves sufficiently attractive to draw large audiences, and the discussions have been particularly full and exhaustive In accord with recent tendencies much space was devoted to gynecological questions, though it may possibly surprise some surgeons not present to notice that the contra indications of electricity as contrasted with surgery received marked notice

The JOURNAL has recognized the importance of these demonstrations of advanced electro-therapeutics from the first, having been the only publication to receive and publish the full proceedings of each meeting, and we take pleasure in announcing the early appearance of the transactions of the recent meeting in forthcoming numbers, together with other contributions from time to time, relating to this interesting field of research

CHOLERA

At no time since the introduction of cholera into Europe in 1829, were there so many infected points as at present This is no doubt owing to the greater facilities of communication, while it is also true the number of cases and the mortality incident to the progress of the disease is not as great as heretofore, the necessary result of greater precaution taken to prevent the spread of the same Cholera is abating in Russia in the districts where for the last two years it has raged with such fatal results, while at St Petersburg, the Crimea, and a few ports on the Black Sea it is on the increase and will no doubt continue so for some time Cases are also reported at Constantinople, and for the first time in Servia Cairo in Egypt is also said to be infected

In Galicia and Hungary the disease still prevails, while the epidemic is decreasing at the Danube ports in Roumania, with the exception of Brahjlon, where the fresh cases and deaths are about the same as for the last three weeks There is not much change at Rome, Genoa, Leghorn and Naples At Budapest there is an increase, also at Vienna In both Budapest and Vienna, cholera is spreading among the better classes At New Keltendorf, near Vienna, a man died of cholera, whose illness is said to have been caused by drinking water from the Danube

A panic has been created at Bilboa on the Bay of Biscay in Spain, by the breaking out of cholera and it is rapidly spreading to the surrounding country At Baremme, a village of 1,000 inhabitants in the Basses Alps in Southeastern France a very violent outbreak has occurred

There has been a decided increase at Brest, Quimper and various other places in Western and Northwestern parts of France, with an increase in the number of infected localities In Belgium, cholera is rapidly spreading in Damperemy, Marchieniess and Aupont, small towns in the province of Hainut

A workman is reported to have cholera at the Hague This is the first case There is not much change in the situation at Berlin or throughout the

German Empire, with the exception of Hamburg Here the disease has again broken out after an exemption of nearly five months This is significant, as we may expect a like occurrence elsewhere It is attributed to a break in the pipes that allowed water from the river Elbe to mix with the pure water (After so long an exemption the question naturally arises how long may streams be polluted by the cholera poison?) Is it not possible that other causes may have had to do with the fresh outbreak? All the cases and deaths reported were in the suburbs of the city One case occurred aboard the Rotterdam steamer *Amsdel* which has been lying in the harbor since September 16 It is also reported that cholera has appeared in the military barracks at Eppendorf a suburb on the Alster River Complaint has been made that the cases were not announced earlier and that the water supply was not all filtered In consequence of this outbreak the Hamburg-American Steamship Company have decided to dispatch their vessels hereafter from Cuxhaven Steerage passengers for America will be kept five days under medical control at Cuxhaven before embarking The stopping of the *Augusta Victoria* at Southampton to await the arrival of a medical inspector from Hamburg, was owing to the fact that one of the crew was suffering from choleraic disease It is announced that if any cases should occur before reaching the port of New York she is to return to Southampton without making a landing It is also stated that the water supply of Hamburg has been examined and found to be pure For the last two weeks deaths by cholera at eight different points in England have been reported, the most serious outbreak being that at Hull The indications are that the disease is slowly spreading in England, although owing to the care taken no serious outbreaks have occurred The following cable will explain itself

> LONDON, Sept 19—Further questions were asked in the House of Commons to-day regarding the presence of cholera in Great Britain In reply to these questions the Rt Hon Henry Fowler, president of the Local Government Board, stated that, with the exception of three ports on the east coast, all the ports of Great Britain were free from cholera There was not the slightest reason, he added, to suppose that there was an epidemic of Asiatic cholera in any part of the United Kingdom No cholera cases had occurred at Southampton The medical experts attached to the Local Government Board held that there was no danger of infection from a ship that had been out fourteen days from Great Britain, and which had a clean bill of health

Where from and how did the three ports on the east coast become infected? Was it water-borne or brought by vessels to these places, carrying immigrants from the continent for transshipment by way of Liverpool to the United States? Unless the baggage of the steerage is thoroughly disinfected, might there not be danger, even if the vessel had a clean bill of health and had been out from Great Britain fourteen days? From the foregoing it will be seen that, owing to the many points of infection and their daily increase, there is still danger of the introduction of cholera into the United States this season While it is true that, owing to the extraordinary efforts that have been made, we have been so far spared, it is also safe to assume that the present pandemic will continue for the next season in Europe Why not, then, suspend immigration?

In this connection it will not be out of place to call attention to the announced discovery at Berlin of a new bacillus which is claimed to have more to do with cholera than the comma bacillus of KOCH, also to a repetition of PETTENKOFER'S and EMMERICH'S experiment as follows

> VIENNA, Sept 20—In the Institute of Experimental Pathology here, Professors Hasterlik and Stockmayer, four students and others swallowed a quantity of comma bacilli They suffered no bad effects beyond headache and nausea Professor Stricker therefore draws the conclusion that the comma bacilli will not cause cholera in the case of strong, healthy subjects

THE POISON OF RESPIRATION

Some recent experiments by RAUER, *Untersuchungen uber die Giftigkeit der Expirationsluft*, detailed in the *Zeitschrift für Hygiene und Infectionskrankheiten*, tend to deprive the organic matter of respired air of the importance hitherto attached to it as a morbific agent Carbonic anhydrid has always been recognized as deleterious when present in large percentages in the air which enters the lungs It is the deadly "after damp" of the mines, and many opportunities unfortunately have been afforded of determining the postmortem appearances in death from the inhalation of this gas We are, therefore, not surprised to find that RAUER'S mice died in an atmosphere in which the carbonic acid produced by the mice themselves amounted to 15 5 per cent because for every per cent so produced an equivalent amount of oxygen was used up, thus reducing the available oxygen to 5 5 per cent Nor are we surprised that they lasted longer but eventually died in a free supply of an atmosphere containing 15 5 per cent of introduced carbonic acid, although the available oxygen of the mixture was 17 5 per cent We have, however, been accustomed to regard the relatively small proportion of carbonic acid in the vitiated atmospheres of overcrowded rooms as in itself comparatively harmless, and to consider that its quantitative determination by the sanitary chemists was of interest only as a measure of the associated organic elimination from the lungs, to which the headache and prostration attending the breathing of such air are usually attributed It is true that R ANGUS SMITH found 3 per cent of carbonic acid to enfeeble the heart and quicken the respiration even to gasp He claimed also that these effects could be det with even 1 per cent, but as he himself fai recognize such effects in the 2 per cent, of the

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A workman is reported to have cholera at the Hague This is the first case There is not much change in the situation at Berlin or throughout the venienced as possible Then, is it lawful to build a sanitarium for the cure of the sick or to bathe in the waters those afflicted with disease? It is certainly lawful to do so, continues the court, provided the sanitarium is properly conducted and well managed, so as to do no injury to any person which reasonably and with due care can be avoided This being true, it follows that those who, with due care, use the water of an artesian well to bathe patients at a sanitarium, the well and sanitarium being on their own premises, are not liable to an adjoining owner for allowing the water, so polluted, to flow into a stream which is the natural water course of that section Moreover, if the person complaining stood by while money was being expended in erecting such sanitarium, and acquiesced for more than a year in the flow of water, he could not, on account of the law of estoppel, enjoin the continued operation of the sanitarium

Mississippi Valley Medical Association —Special car for physicians will leave the new Illinois Central R R station, 12th Street and Michigan Avenue on Tuesday evening at 11 30, by the "Big 4" route, reaching Indianapolis at 7 A M Fare for the round trip, one and one-third excursion rate The sleeping-car will be at the depot at 9 30 P M for such as wish to retire earlier than 11 30 Engage sleeper and buy tickets at the Big Four office, No 234 Clark Street

SELECTIONS

Report of the British Local Government Board, 1891-92 —The supplement to the twenty-first annual report of the Local Government Board, 1891–92, containing the report of the medical officer, has just been received Dr R Thorne Thorne, who now occupies this important position under the British Government, begins his report with a testimonial to the distinguished services of his predecessor, Sir George Buchanan, who resigned March, 1892 "For over thirty years," he says, "Sir George Buchanan has, either as medical inspector or as the Board's medical officer, contributed to the annual reports of the medical department, and many of his contributions have become classic in the literature of public health both in this and in other countries But those alone who have had the opportunity and pleasure of working under his direction can appreciate to the full the important influence for good which his labors have had, and they alone can realize how much the medical department owes to the example which he set, as an earnest worker and director who never ceased to claim that all true sanitary progress must be based on accurate and scientific research into the etiology of disease " Sir George Buchanan was a worthy successor to Sir John Simon, whose name is a household word in the annals of public health

An interesting account is given by Dr Bruce Lowe of an anomalous illness that prevailed in Northamptonshire characterized by pneumonia, sometimes by meningeal symptoms, and frequently associated with tonsilitis or sore throat Certain of these cases had much in common with sporadic cases of cerebro-spinal fever that prevailed in some of the Eastern counties during the previous year

An outbreak of scarlet fever at Enfield and Edmonton, investigated by Dr S Monckton Copeman, was attributed to a milk supply which was derived from a farm at some distance from Essex, where attacks of the same disease occurred among consumers of milk from the same farm No infection of the milk from a human source could be made out, but the cows were found to be suffering from udder eruption Inoculation of calves with matter from this eruption gave negative results in the hands of Dr Klein In cultures on gelatin a non liquefying microbe was the predominant organism, similar to the streptococcus isolated by him from sores on Hendon cows in 1885, but the present organism inoculated into mice proved only doubtfully pathogenic

Complaints of nuisance and of injury to health from the transportation of town manure to agricultural districts led to an investigation and an exhaustive report on the subject The complaints had reference chiefly to manure from London, although that from other large towns as Liverpool, Newcastle, Nottingham, Portsmouth and Plymouth, had also been complained of in the districts to which it is distributed London manure is as a rule entirely free from human excreta, but it is otherwise a compound of nearly every form of animal and of some forms of vegetable refuse, such materials as dead and putrefying animals, fish guts, paunches etc., being mingled with stable manure, cabbage stalks, rotten vegetables, etc And the diseases which were most commonly regarded as being referable to the offensive emanations were diphtheria and allied sore throat Two principal objects were held in view during the inquiry To learn how far allegations as to injury to health and even as to the production of infectious diseases were supported by actual experience and to ascertain how far nuisances, owing to the unloading and temporary deposit of the manure at railway sidings and elsewhere the lack of care in carting could be dealt with by further regulations The outcome of the inquiry under the first heading showed that in so far as bodily discomfort and functional disturbance, at times involving general impairment of health, are concerned, exposure more or less recurring to the offensive effluvia concerned does affect health and that whilst certain affections, such as sore throat, which it has not always been possible to differentiate from diphtheria can with some degree of certainty be held to have relationship with exposure to the manure effluvia, it has not been possible so to eliminate other sources of infection and of disease as to identify the effluvia with the production of any specific affection To a great extent the nuisances arising from the manure traffic are already under the control of local authorities through the provisions of the Public Health Acts or through by-laws which may be made thereunder but in agricultural districts and small market towns there is often an indisposition on the part of local authorities to exercise the powers which they possess in this connection

The supplement contains a further report on the pathology and etiology of diphtheria by Dr Klein Taking the presence of the Klebs-Loffler bacillus in definite relation with the mucous membrane as the vera causa of diphtheria he tested various throat ailments with the following results "Scarlatinal diphtheritis" occurring in the early days of scarlatina is not, judged from the bacteriological standpoint, diphtheria, but similar manifestations whether of diphtheritic or croupy type, occurring in the later stages of and during convalescence from scarlet fever, are almost invariably true diphtheria He found also that membranous croup of the larynx or trachea, although altogether dissociated clinically from diphtheria, must be regarded as essentially that disease

Dr Klein's experiments on the inhibitory action of the metabolic products of one microorgan

pro-water factories, the organic matter of the respired air again assumed importance as the most deleterious of the excreta of respiration

Now, however, comes **RAUER** with mice unharmed by the products of respiration, provided the carbonic acid be removed He considers it proved by his experiments that there is no other poison produced by the breathing of animals than the carbonic acid, that indeed the existence of an organic poison in the air exhaled is impossible, for when the carbonic acid was removed there was no injurious effect, and a mixture of artificially produced carbonic acid had the same effect as that produced by an air of respiration containing the same proportion of carbonic acid With the exception of this acid there is no gaseous poison liable to be effective in small quantities evolved from men or animals, and the conclusion is reached that men may live in absolute health in rooms with defective ventilation

Without questioning the accuracy of these experiments we are inclined to offset them with the grand experiment that has been made during the past half century by medical men, sanitarians and philanthropists in increasing the air space and ventilation in prisons, tenements, barracks, emigrant and other ships, and living rooms generally, with the result of banishing the deadly typhus which the accumulated experience of generations recognized as due to the aggregation of human beings in confined and unventilated quarters **RAUER**'s experiments are interesting, but the other is more convincing

RIGHT TO MAINTAIN SANITARIUMS WHICH POLLUTE NEIGHBORING STREAMS

Hospitals and homes for the sick are recognized as lawful institutions, to be fostered and encouraged, and not to be discouraged or repressed But now comes the novel and important question as to whether one who sinks an artesian well upon his own land, and uses the water to bathe the patients in a sanitarium or hospital erected by him on the premises, is liable to injunction and damages for allowing the water to flow into a stream which is the natural water course of the basin in which the artesian well is situated, the owner being free from negligence or malice, and using all due care in avoiding injury to his neighbor This was exhaustively considered by the Supreme Court of Indiana in the case of Barnard v Shirley, decided June 6, 1893, reported in the advance sheets of 34 "Northeastern Reporter," 600 No principle of law is better settled, it is said, than that a man has the right to the lawful use and enjoyment of his own property, and that if, in the enjoyment of such right, without negligence or malice, an inconvenience or loss occurs to his neighbor, it is a wrong for which there is no liability If, in the excavation of his land, he should uncover a spring of water, salt or fresh, acidulated or sweet, he will certainly not be obliged to cover it again, or to conduct it out of its course, lest the stream, in its natural flow, may reach his neighbor's land But on the main point involved here, the nearest precedent is found in a mining case, where it was held that in the operation of mining in the ordinary and usual manner, a person may, upon his own lands, lead the water which percolates into his mine into the streams which form the natural drainage of the basin in which the mineral is situate, although the quantity as well as the quality of the water in the stream may thereby be affected And this doctrine has been adopted by the court in this case, where the contention was that water caused to rise from the earth was polluted in bathing the bodies of diseased persons, having all manner of diseases, including syphilis, which after it had thus become befouled, was caused to be conveyed in a tile ditch underground, to the adjoining lands over which it was made to flow into a natural stream of water running thereon, causing such natural stream of water to become befouled and polluted, thereby exposing the same to the stock pasturing and feeding upon said land where stock was accustomed to run, feed, and pasture, such as milch cows, horses and hogs, which drank the water in its befouled and polluted condition The court said that the natural right to have the water of a stream descend in its pure state must yield to the equal right of those above Their use of the stream for the manifold purposes for which they might lawfully use it would tend to render it more or less impure The water might thus be rendered unfit for many uses for which it had before been suitable, but, so far as that condition may result from reasonable use of the stream in accordance with the common right, the lower riparian proprietor has no remedy Sewage and waste material may be cast into streams if material injury is not thereby caused Inconveniences resulting from many causes must be endured by individuals for the general good otherwise we should have to forego a multitude of the blessings of modern civilization

Still, when a business is dangerous, unhealthful, or otherwise greatly injurious to a community or to an individual, and it is possible to avoid the injury by a more careful management, or even, if necessary, by a removal to a more secluded or less objectionable place, then the owners of the noxious business will be mulcted in damages, and, if necessary, restrained by the courts And a man may not carry on a business which poisons the air and renders it unhealthy in a thickly populated neighborhood, and especially in the center of a large city So establishments which involve danger, as powder mills and certain kinds of manufactories, must seek a secluded place where as few persons may be inconvenienced as possible Then, is it lawful to build a sanitarium for the cure of the sick or to bathe in the waters those afflicted with disease? It is certainly lawful to do so, continues the court, provided the sanitarium is properly conducted and well managed, so as to do no injury to any person which reasonably and with due care can be avoided This being true, it follows that those who, with due care, use the water of an artesian well to bathe patients at a sanitarium, the well and sanitarium being on their own premises, are not liable to an adjoining owner for allowing the water, so polluted, to flow into a stream which is the natural water course of that section Moreover, if the person complaining stood by while money was being expended in erecting such sanitarium, and acquiesced for more than a year in the flow of water, he could not, on account of the law of estoppel, enjoin the continued operation of the sanitarium

MISSISSIPPI VALLEY MEDICAL ASSOCIATION —Special car for physicians will leave the new Illinois Central R R station, 12th Street and Michigan Avenue on Tuesday evening at 11 30, by the "Big 4" route, reaching Indianapolis at 7 A M Fare for the round trip, one and one-third excursion rate The sleeping-car will be at the depot at 9 30 P M for such as wish to retire earlier than 11 30 Engage sleeper and buy tickets at the Big Four office, No 234 Clark Street

SELECTIONS

Report of the British Local Government Board, 1891-92 —The supplement to the twenty-first annual report of the Local Government Board, 1891-92, containing the report of the medical officer, has just been received Dr R Thorne Thorne, who now occupies this important position under the British Government, begins his report with a testimonial to the distinguished services of his predecessor, Sir George Buchanan, who resigned March, 1892 "For over thirty years," he says, "Sir George Buchanan has, either as medical inspector or as the Board's medical officer, contributed to the annual reports of the medical department, and many of his contributions have become classic in the literature of public health both in this and in other countries But those alone who have had the opportunity and pleasure of working under his direction can appreciate to the full the important influence for good which his labors have had, and they alone can realize how much the medical department owes to the example which he set, as an earnest worker and director who never ceased to claim that all true sanitary progress must be based on accurate and scientific research into the etiology of disease " Sir George Buchanan was a worthy successor to Sir John Simon, whose name is a household word in the annals of public health

An interesting account is given by Dr Bruce Lowe of an anomalous illness that prevailed in Northamptonshire characterized by pneumonia, sometimes by meningeal symptoms, and frequently associated with tonsilitis or sore throat Certain of these cases had much in common with sporadic cases of cerebro-spinal fever that prevailed in some of the Eastern counties during the previous year

An outbreak of scarlet fever at Enfield and Edmonton, investigated by Dr S Monckton Copeman, was attributed to a milk supply which was derived from a farm at some distance from Essex, where attacks of the same disease occurred among consumers of milk from the same farm No infection of the milk from a human source could be made out, but the cows were found to be suffering from udder eruption Inoculation of calves with matter from this eruption gave negative results in the hands of Dr Klein In cultures on gelatin a non-liquefying microbe was the predominant organism, similar to the streptococcus isolated by him from sores on Hendon cows in 1885, but the present organism inoculated into mice proved only doubtfully pathogenic

Complaints of nuisance and of injury to health from the transportation of town manure to agricultural districts led to an investigation and an exhaustive report on the subject The complaints had reference chiefly to manure from London, although that from other large towns as Liverpool, Newcastle, Nottingham, Portsmouth and Plymouth, had also been complained of in the districts to which it is distributed London manure is as a rule entirely free from human excreta, but it is otherwise a compound of nearly every form of animal and of some forms of vegetable refuse, such materials as dead and putrefying animals, fish guts, paunches etc, being mingled with stable manure, cabbage stalks, rotten vegetables, etc And the diseases which were most commonly regarded as being referable to the offensive emanations were diphtheria and allied sore throat Two principal objects were held in view during the inquiry To learn how far allegations as to injury to health and even as to the production of definite diseases were supported by actual experience, and to ascertain how far nuisances, owing to the unloading and temporary deposit of the manure at railway sidings and elsewhere, and lack of care in carting could be dealt with by law or regulations The outcome of the inquiry under the first heading showed that in so far as bodily discomfort and functional disturbance, at times involving general impairment of health, are concerned, exposure more or less recurring to the offensive effluvia concerned does affect health, and that whilst certain affections, such as sore throat, which it has not always been possible to differentiate from diphtheria, can with some degree of certainty be held to have relationship with exposure to the manure effluvia, it has not been possible so to eliminate other sources of infection and of disease as to identify the effluvia with the production of any specific affection To a great extent the nuisances arising from the manure traffic are already under the control of local authorities through the provisions of the Public Health Acts or through by-laws which may be made thereunder, but in agricultural districts and small market towns there is often an indisposition on the part of local authorities to exercise the powers which they possess in this connection

The supplement contains a further report on the pathology and etiology of diphtheria by Dr Klein Taking the presence of the Klebs-Loffler bacillus in definite relation with the mucous membrane as the *vera causa* of diphtheria he tested various throat ailments with the following results 'Scarlatinal diphtheritis" occurring in the early days of scarlatina is not, judged from the bacteriological standpoint, diphtheria, but similar manifestations whether of diphtheritic or croupy type, occurring in the later stages of and during convalescence from scarlet fever, are almost invariably true diphtheria He found also that membranous croup of the larynx or trachea, although altogether dissociated clinically from diphtheria, must be regarded as essentially that disease

Dr Klein's experiments on the inhibitory action of the metabolic products of one microorganism on the life pro-inclined to consider morphœa and scleroderma as distinct affections, while European authorities are rather inclined to the opposite view

The author has not attempted to advance any original suggestions regarding treatment, contenting himself with the clinical presentation of the case

Dr W A Hardaway of St Louis, Mo, read a paper entitled

A CASE OF TUBERCULOSIS OF THE SKIN SIMULATING LUPUS ERYTHEMATOSUS

The patient was a pharmacist, 28 years of age, previous health good, family history good and no history of tubercle Tall and spare, and of sallow complexion, yet he is a man of great endurance In May, 1892, he noticed on his left malar region a small yellowish elevation the size of a pinhead This was supposed to be a flesh worm and was squeezed, blood only being thereby obtained The lesion gradually enlarged peripherally, becoming hard and red No subjective phenomena He came under Dr Hardaway's care in June, 1892, the lesion being now as large as a dime, presenting an atrophic whitish center surrounded by a slightly raised infiltrated border of a dull red color The lesion was anæsthetic, a characteristic which has been noticed in tubercular syphilides The anæsthesia was temporary In a short time the patient passed from under observation and was gone for a month, during which time he was thoroughly treated for syphilis by another physician The treatment simply aggravated the general and local conditions September 3, 1892, the original lesion was the size of a half dollar, not raised from the surface and moderately infiltrated The center is still atrophic, and the same narrow dull red line presents at the borders In a few weeks several small acniform pustules appeared on the right temple, side of the nose, and inferior angle of the right eye Others presented on the end of the nose, right ala, and left cheek These lesions were not painful or itchy Each lesion was surrounded by a red areola which subsequently extended and became infiltrated, crusts forming over the centers of the lesions The crusts were fatty or sebaceous in character, and with a dull red surface beneath were suggestive of lupus erythematosus As the borders of the lesions extended the centers cicatrized, presenting the same dirty yellow appearance of the original patch December 9, thiosinamin was given hypodermically at 12, and the patient stated that about 7 P M the patches became hot and red, remaining so for an hour or two Other injections of the drug were subsequently given but without effect December 22, the lesion in the right eye had become as large as a quarter of a dollar Electrolysis had been tried on the spot on the left temple, but it was still spreading A new spot was now found on the chest, beginning like an acne papule, which became postulated and finally scaly This went through the same metamorphosis as the previous lesions, the elevated red border extending until the lesion was as large as a pea, when it was thoroughly destroyed by electrolysis Early in January a small piece of skin was excised from the lesion on the right temple and examined microscopically Electrolysis was tried upon the other lesions with an apparent cure, followed by a relapse after a few months, manifesting itself first by the formation of a scale in the center of the scar Electrolysis was persisted in as fast as the spots appeared and with apparent success In March a small patch similar to the others appeared upon the scalp, this is now the size of a dime The tendency to peripheral extension throughout has been a marked feature in this case The whole nose finally became involved and became a continuous lesion of partly red and partly cicatrized integument, presenting a striking likeness to some forms of lupus erythematosus Dr Hardaway thought that this resemblance would have been more striking if the patches on the side of the face had been allowed to coalesce instead of being destroyed by electrolysis At no time could nodules of lupus vulgaris be demonstrated, nor were the sebaceous plugs of lupus erythematosus seen at any time The patient's general health has continued so poor that at one time general tuberculosis was considered imminent A trip to Colorado brought about great improvement At last accounts the disease was apparently quiescent, the patient's general health good, and no lesions of the lungs and larynx have been detected Dr C Heitzmann reports, after microscopical examination of the excised piece of skin, that a moderate number of tubercle bacilli were found A large number of inflammatory corpuscles were also detected, displacing the fibrous connective tissue Nests of inflammatory corpuscles were seen in the arrangement characteristic of tuberculosis The diagnosis was local tuberculosis of the skin, which was entirely in accord with the clinical diagnosis

Dr H R Crocker of London, Eng, read a paper on

LUPUS ERYTHEMATOSUS AS AN IMITATOR OF VARIOUS FORMS OF DERMATITIS

The author said that lupus erythematosus as an imitator of various forms of simple dermatitis was a formidable rival of syphilis itself It was to this aspect of the disease that he desired to direct attention by relating some cases and showing drawings which illustrated the points he wished to place before the Association

The first drawing was an instance of a lupus imitating erythema tuberculatum The patient was 27 years of age The lesions commenced on the right cheek There was only one spot for the first two years, then others formed on the side of the nose, and they then became scattered irregularly over the face, but with the exception of a hempseed sized nodule on the left ear, there were none anywhere else The lobes of both ears were atrophied looking, but the patient said there had never been any lesions on them All the lesions were exactly like an erythema tuberculatum, varying from a hempseed to half an inch in diameter, quite smooth except one on the side of the nose, which was scaly They were of a uniform purplish-red except one, which was whiter in the center

Case 2 showed an advanced condition of the disease, which began in a similar form to Case 1

Case 3 was one of lupus erythematosus, like erythema papulatum The patient, aged 42, was a cab driver Two years previously he had some rash on the cheeks which lasted only a month, and it was not until a year ago that the present eruption began on the sides of the cheek, and has gradually extended until it reached its present condition The eruption when seen occupied the whole face below the eyebrows, the orbits themselves and the lower lip escaping, but the chin, except in the center, was affected On the left side it extended above the brow, but below the orbits which was remarkably symmetrical The most recent lesions were on the lower part of the side of the face and below the jaw In these positions they were the form of erythematosus, slightly raised discs from a half to a quarter of an inch in diameter, the most recent were quite smooth and slightly convex, the larger ones were not prominent in the center and but slightly scaly

Case 4 was like diffuse erythema, the patient being a lady 43 years of age The disease had commenced three years previously as a small red spot on the side of the nose and had spread continuously, the whole nose was intensely reddened and slightly scaly, the skin thickened and infiltrated, but the orifices of the sebaceous glands were not patent or plugged

Another disease which lupus erythematosus imitates is psoriasis, and the author reported a case in point A rarer imitation is that of lichen planus, of which the author had seen only two cases

Dr Crocker also reported a case of lupus erythematosus nodulatum He had met with three or four other cases of this, but not with so many distinct foci of disease In two cases there was only a single nodule in each He also remembers a case in which there were even more foci of disease in a patient of the late Dr Tilbury Fox Cavafy also showed a man at the Dermatological Society of London, in 1892, but Dr Crocker was not aware of any other cases having been recorded

(*To be continued*)

New York State Medical Association—Program of the proceedings of the tenth annual meeting, to be held at the Mott Memorial Hall, on Madison Avenue Introductory, Monday, October 9, 1893

Evening Session, 8 o'clock—1 Address of Welcome, by the chairman of the Committee of Arrangements, J G Truax, M D, of New York Co 2 Address by the president 3 Address The medical work of the Association during its first decade, by John Shrady, M D, of New York Co Collation

First Day, Tuesday, October 10—*Morning session, 9 o'clock* Order of business *a* Calling the meeting to order *b* Report of the Committee of Arrangements *c* Address of the president Read at evening session October 9 *d* Annual report of the council *e* Report of special committees *f* Unfinished business *g* New business *A* Annual reports of the presidents of branch associations, in their numerical order, to be read by title *B* Annual report of the president of the New York County Medical Association, to be read by title

4 Address The surgical work of the Association during its first decade, by Stephen Smith, M D , of New York Co

5 ' Report of eight cases of placenta prævia," by Zera J Lusk, M D , of Wyoming Co

6 " Penetrating wound of anterior fossa through orbital plate of frontal bone Recovery," by Zera J Lusk, M D , of Wyoming Co

7 "The treatment of epithelioma and the cancroid ulcers by topical application," by Nelson J North, M D , of Kings Co

8 "Prevention of disease" by James G Porteous, of Dutchess Co

h Announcement by the presiding officer that the Fellows from the different districts shall appoint two members of the nominating committee from each district *i* Appointment by the president of a member at large of the nominating committee *j* Adjournment of the session During this recess of half an hour, the Fellows from the different districts shall meet to appoint the two members of the nominating committee from each district

First Day, Tuesday, October 10 —Afternoon session, 1 o'clock Discussion on lesions of the pleura 9 The discussion will be opened by John Shrady, M D , of New York Co , propounding the following questions

Question 1 What are the factors of pleurisy? Its forms and contributive conditions? What are the pathological changes in a case of progressive pleurisy ending in recovery? 10, by Frank W Ross, M D , of Chemung Co 11, by William McCollom, M D , of Kings Co,

Question 2 What are the points of differential diagnosis in pleurisy and other affections of the chest? 12, by Edward F Brush, M D , of Westchester Co 13, by J Blake White, M D , of New York Co 14, by John G Truax, M D , of New York Co

Question 3 What is the treatment of empyema, with relative value of aspiration, rib resection and free opening with tube drainage? 15, by M K Hogan, M D , of New York Co 16, by Charles A Leale, M D of New York Co

17 "The surgical treatment of pulmonary cavities," by N P Dandridge, M D , of Cincinnati, O

First Day, Tuesday, October 10 —Night session, 7 30 o'clock

18 ' Remarks on fermentative dyspepsia," by Austin Flint, M D , of New York Co

19 " Open treatment of tuberculous disease of the joints," by T M L Chrystie, M D , of New York Co

20 ' Bloodless amputation at the hip joint Report of cases operated on by the author's method," by John A Wyeth, M D , of New York Co

21 " Report of a case of osteotomy of both femora for the relief of deformity following ankylosis of the hip joints," by Reginald H Sayre, M D of New York Co

Second Day, Wednesday, October 11 —Morning session, 9 o'clock Order of business *a* Calling the meeting to order *b* Communications from the council *c* Reports of special committees *d* Unfinished business *e* New business

22 Address The obstetrical and gynecological work of the Association during its first decade, by George Tucker Harrison, M D , of New York Co

23 " Rare forms of gout and rheumatism," by Sir James A Grant, of Ottawa, Canada

24 "Treatment often indicated after trachelorrhaphy," by William H Robb, M D , of Montgomery Co

25 " ℞," by Henry D Didama, of Onondaga Co

26 "Ten years' experience in the treatment of cataract," by Alvin A Hubbell, M D , of Erie Co

27 "The treatment of enteric fever" by Gustavus Eliot, M D , of New Haven, Conn

28 "Voluntary commitment of the insane to asylums," by W D Granger, M D , of Westchester Co

f Adjournment of the session

Second Day, Wednesday, October 11 —Afternoon session, 1 o'clock

29 ' Surgical and pathological memoranda," by Donald McLean, M D , of Detroit, Mich

Discussion on the treatment of appendicitis 30 The discussion will be opened by Frederic S Dennis, M D , of New York Co , propounding the following questions

Question 1 What proportion of cases of appendicitis end in resolution?

Question 2 What class of cases require immediate operation?

Question 3 What class of cases do not require immediate operation? These questions will be answered by 31 R N Cooley, M D , of Oswego Co 32 Donald McLean, M D , of Detroit, Mich 33 W S Tremaine, M D , of Erie Co 34 Joseph D Bryant, M D , of New York Co 35 John W S Gouley, M D , of New York Co

' *Second Day, Wednesday, October 11* —Evening Banquet Fellows of the Association have made arrangements to celebrate this first decimal assembly by a banquet, further notice of which will be given by the Secretary

Third Day, Thursday, October 12 —Morning session, 6 o'clock Order of business *a* Calling the meeting to order *b* Communications from the council *c* Report of the nominating committee, and action upon such report by the Association *d* Report of special committees *e* Unfinished business *f* New business

36 'The male catheter, with some observations upon the proper mode of introduction into the bladder," by Douglas Ayres, M D , of Montgomery Co

37 " Researches on the efficacy of vaccinia after typhoid fever," by William Finder, Jr M D , of Rensselaer Co

38 "Reflections on the need of close observation of disease and upon the value of hygienic therapeutics," by H Ernst Schmid, M D , of Westchester Co

39 Unique case of traumatic tetanus, with generalization recovery," by John G Orton, M D , of Broome Co

40 " A case of puerperal blindness," by Darwin Colvin, M D , of Wayne Co

41 'A plea for the non-operative method of treating dysmenorrhea, pelvic inflammation and pelvic abscess," by T J McGillicuddy, M D , of New York Co

42 " An additional note on nephrotomy and nephrectomy," by E D Ferguson, M D , of Rensselaer Co

43 " Fifty operations for laceration of the cervix uteri," by J B Harvie, M D , of Rensselaer Co

44 " Brief comments on the materia medica, pharmacy and therapeutics of the year ending October 1, 1893," by E H Squibb, M D , of Kings Co

g Adjournment of session

Third Day, Thursday, October 12 —Afternoon Excursion to the island hospitals by invitation of the commissioners of charities and correction Luncheon will be served on board the steamer, which will start at 1 o'clock from the pier at the foot of 26th Street, East River

Papers may be read "—— either entire, by abstract, or by title only, as may be determined by the council ——

" The reading of a paper shall not occupy more than thirty minutes, except by permission of the Association

"No person shall speak more than once, and then not longer than ten minutes, in the discussion of any paper, except by permission of the Association

"No voluntary communication shall exceed fifteen minutes in length, except by permission of the Association ——"

See By-Laws Article X, Sections 7, 8, 9 and 11

COMMITTEE OF ARRANGEMENTS —S B Wylie McLeod President E D Ferguson Secretary, ex officio members of the committee John G Truax Chairman Chas E Denison Secretary F A Baldwin C G Campbell, Alfred L Carroll, Ellery Denison, A Palmer Dudley, John E Erdmann John W S Gouley, George T Harrison Charles A Leale, Ogden C Ludlow James C Mackenzie, William McCollom, Johnston McLeod, Valentine Mott, A D Ruggles, John Shrady, Stephen Smith, E R Squibb

COUNCIL OF THE NEW YORK STATE MEDICAL ASSOCIATION 1893 —*First or Northern District* —R N Cooley Vice President Hannibal Centre, Oswego Co E T Rulison (1893) Amsterdam Montgomery Co A P Dodge (1894), Oneida Castle, Oneida Co *Counties* Franklin Fulton, Hamilton, Herkimer, Jefferson, Lewis, Montgomery, Oneida Oswego, St Lawrence

Second or Eastern District—J C Hannan Vice President, Hoosick Falls Rensselaer Co Thomas Wilson (1893) Claverack, Columbia Co J B Harvie (1894), Troy Rensselaer Co , E D Ferguson Secretary and Treasurer, Troy Rensselaer Co *Counties* Albany, Clinton, Columbia, Essex Green, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

Third or Central District —N Jacobson Vice President, Syracuse, Onondaga Co , Homer O Jewett (1893), Cortland, Cortland Co M Cavana (1894), Oneida Madison Co *Counties* Broome Cayuga, Chemung Chenango Cortland Delaware, Madison Onondaga, Otsego, Schuyler, Seneca Tioga, Tompkins

Fourth or Western District —Z J Lusk, Vice President, Warsaw, Wyoming Co Thomas D Strong (1893), Westfield Chautauqua Co F H Moyer (1894), Moscow, Livingston Co *Counties* Alleghany, Cattaraugus, Chautauqua, Erie, Genesee, Livingston, Monroe, Niagara, Ontario, Orleans Steuben, Wayne Wyoming Yates

Fifth or Southern District —S B W McLeod President, 247 West 23d St , New York, New York Co John G Truax (1893) 17 East 127th St , New York, New York Co Alfred L Carroll (1894), 30 West 59th St , New York New York Co John W S Gouley, Director of the Library, 24 Madison Avenue New York New York Co John Shrady, Member at Large 149 West 126th St , New York New York Co *Counties* Dutchess Kings New York Orange Putnam, Queens, Richmond, Rockland, Suffolk Sullivan, Ulster Westchester

Communications may be addressed to *Dr E D* Ferguson, Secretary Troy, N Y

Blank applications for membership in the ASSOCIATION, at the JOURNAL office

Tri-State Medical Society —Regular session will convene at Peoria, Ill, Tuesday and Wednesday, October 3 and 4, 1893 All members of the regular medical profession are cordially invited to be present and participate with us W H Martin, President, J M Ball, Secretary

Program —Morning sessions, 9 A M Afternoon sessions, 2 P M Lecture on Tuesday evening, October 3, at 8 o'clock, by Emery Lanphear, M D, Ph D, of Kansas City, Mo Subject, 'The Wonders of the Brain"

The sessions of the Society will be held in the spacious hall of the Y M C A

Order of Business —1, Roll call, 2, reading of minutes of last meeting, 3, reading of notes from absentees, 4, proposals for membership, 5, report of committee on credentials, 6, resolutions introducing new business, 7, selection of next place of meeting, 8, report of special committees, 9, report of treasurer, 10, election of delegates to State societies, 11, miscellaneous business, 13, address of the retiring president, 14, reading of essays, 15 election of officers, 16, adjournment

In Memoriam —Wesley V English, M D J A Scroggs, M D, Keokuk, Iowa

List of Papers

1 Charles W Hall, Kewanee, Ill, "Epilepsy"

2 J B Murphy, Chicago, Ill, "Perforative appendicitis"

3 Wm Jepson, Sioux City, Iowa, "Intestinal obstruction from a gallstone"

4 John Punton, Kansas City, Mo "Treatment and prophylaxis of insanity"

5 E Wyllys Andrews, Chicago, Ill "Recent improvements in the surgery of hernia"

6 H H Mudd, St Louis, Mo "Cancer of the tongue"

7 J S Pyle, Canton, Ohio 'A plea for the appropriation of criminals condemned to capital punishment to the experimental physiologist"

8 M S Marcy, Peoria, Ill "Abortion"

9 George Minges, Dubuque, Iowa "Further Experience with Koch's tuberculin"

10 Boerne Bettman Chicago, Ill "Extraction of a piece of steel from the vitreous with a magnet"

11 John I Skelly Pekin, Ill "Symphyseotomy"

12 C E Ruth, Keokuk, Iowa "Surgical treatment of meningitis"

13 E J Blair, Monmouth, Ill "Amputation above the hip joint"

14 A V L Brokaw, St Louis, Mo "The conservative treatment of uterine myomas by operation"

15 Martin M Ritter, Chicago Ill "Intubation vs tracheotomy"

16 J F Percy, Galesburg, Ill "Vivisection"

17 John B Bacon, Chicago, Ill "A new operation for the cure of stricture of the rectum—with demonstration"

18 O B Will, Peoria, Ill "Bacteriology of the female genital tract"

19 Henry T Byford, Chicago, Ill Subject not announced

20 T J Beattie, Kansas City, Mo "The management of uterine fibroids"

21 Ludwig Hektoen, Chicago, Ill "Fibroid induration following lobar pneumonia"

22 Geo N Kreider, Springfield, Ill Subject not announced

23 Bayard Holmes, Chicago, Ill "Can an adequate system of medical education reduce the annual public expenditures for the education and support of the defective and dependent classes? What would such an education cost, what would it save, and how can it be instituted?"

24 Frank Parsons Norbury, Jacksonville, Ill "Nervous and mental disorders in women incidental to childbirth"

25 Nicholas Senn, Chicago, Ill Subject not announced

26 J H Duncan, St Louis, Mo "Lupus"

27 Ellen H Heise, Canton, Ill Subject not announced

How to become a Member —Extract from the Constitution "Membership in this Society shall be limited to those members of the medical profession who are regular graduates in medicine, and who acknowledge allegiance to the American Medical Association * * * All applications for membership shall be referred to the Committee on Credentials, and shall be accompanied by a fee of two dollars" Extract from the By-Laws 'Every member of this Society shall pay to the Treasurer the sum of one dollar annually before participating in the business of the meeting"

Special Notice —The medical men of Peoria take this opportunity of cordially inviting you to this meeting

Officers —President, Dr W H Martin, Kahoka, Mo, Senior V P, Dr Calvin Snook, Fairfield Iowa, Junior V P, Dr O F Pyle, Memphis, Mo, Treasurer, Dr H S Reese, Wayland, Mo, Secretary, Dr J M Ball, Keokuk Iowa

Committee on Arrangements —Dr W R Allison, Peoria, Dr J F Percy, Galesburg, Dr Frank Parsons Norbury, Jacksonville

The Medical Society of the Missouri Valley met at Council Bluffs, Iowa, on Thursday, Sept 21, 1893, under the presidency of Dr J M Knott of Sioux City The total membership of this Society has reached 365, and it is in a flourishing condition Dr F S Thomas of Council Bluffs, is the secretary

DOMESTIC CORRESPONDENCE

Mr Ernest Hart Replies to Dr Hammond

To the Editor —My respect for and my sympathy with the medical profession in America, and my knowledge of their sentiments, forbid me to regard Dr William A Hammond as their representative in the defense which he puts forward in the columns of the *New York Medical Journal*, Sept. 16, of the practices of publicity hunting, by newspaper interviews, newspaper portraits and of the use of and traffic in secret preparations, etc I have in the course of recent travel received personally from many hundreds of prominent and representative physicians in Milwaukee, Washington, Boston, Philadelphia, Chicago, Cincinnati, Detroit, and from all parts of the United States, their cordial congratulations on the tone and substance of the addresses which I had the honor to deliver at Milwaukee and Washington I have been assured on all hands of the entire sympathy of the great body of the profession in the views therein laid down and discussed I should have been surprised, however, and perhaps disappointed if they had not elicited some expression of pain and anger from certain quarters "Let the galled jade wince, the withers" of the great American medical profession are, I am assured, "unwrung" Your correspondent, in an access of ethical agnosticism, assumes that the enumeration of ethical data as to medical conduct was, or could be, a reproval direct or implied to the medical profession of America That is an unmerited insult which he addresses to his profession, and indicates a view which I apprehend to be special to himself. Let him enjoy the practices which he defends, I do not think he is likely to find much support or sympathy in them from medical men in good standing His account of the position of the medical men in Great Britain is a parody undeserving of serious notice So, as to myself, whom he favors with some personal abuse, I have been avowedly the scientific adviser to, but it is untrue that I have ever held any of the stock of, the Apollinaris Water Company As to his other trivialities, I was the guest of the Pan-American Medical Congress, and on entering its headquarters I registered in ceremonious form

I have no desire to be honored amongst "the Pan-Anglicans,"the "Fat Men of America," and the other objects of lay interest, with whom Dr Hammond puts medical men on a par, and I do not agree with him that medical men should desire to share with them the honor of newspaper notoriety I do not believe any details of my medical career have ever appeared in any lay paper

I suggest that it might be desirable for Dr Hammond to rely less upon his imagination for his facts, and not to assume to speak for a profession from which he has no sort of mandate, and which would, I am well assured, repudiate, if consulted, both his advocacy and his methods of action and of expression

I am assured that he utterly misrepresents that profession, both in his statement of principles which he ascribes to it, and in his abuse of myself I am, sir,

Yours faithfully, Ernest Hart

MISCELLANY

The Chemical Laboratory of the U S Department of Agriculture of the World's Columbian Exposition —Of interest to medical science is the work and exhibit of the chemical division of the National Department of Agriculture in the Government Building at Jackson Park

This exhibit occupies a liberal floor space in the northeast corner of the Government Building, and is designed to illustrate the chemical work of the department in its various aspects The appliances for investigating sugar producing plants are perhaps the most complete of any in the world Full illustrations are given of the analyses of sugar cane sorghum and sugar beets Large numbers of beets are daily reaching the laboratory from different parts of the country and are at once analyzed This part of the exhibit has also been put to good use by the board of awards, several hundred samples of sugars and syrups having been examined for the agricultural jury

A most interesting exhibit shows how the Darwinian law of natural variation has been utilized in the improvement of a sugar producing plant In 1888 experiments were commenced by the department on this line In that year in a plot of sorghum growing in Kansas and submitted to systematic examination, there was found one plant with a phenomenal content of sugar The seeds of this plant were propagated carefully and the progeny again examined None of the progeny reached the degree of perfection of the parent, but many plants were produced showing a content of sugar above the average The best of these was selected for further planting, and this process has been continued up to the present time From this one parent-head, as a result of these continued selections, a variety of sorghum cane has now been fully established having a sugar making value equal to the best sugar cane of Louisiana Last year nearly five hundred selections were made from canes which had an average content of nearly 20 per cent sugar Illustrations are also given of the same line of work with sugar beets

Of most interest to the medical profession, however, are the exhibit and work relating to the adulteration of foods Pure food is an essential to health and every physician is deeply interested in securing to the public, immunity from fraud in this direction, of both a financial and hygienic nature The thesis which is proposed by the exhibit is that all foods exposed for sale should be what their names imply The exhibit shows how far our American food products fail to meet the fundamental conditions of this proposition Honey purchased in the open market is shown to have been made quite independent of the mediation of bees, or at most having only enough pure honey to give the required flavor Coffee beans are exhibited which have been molded from a mixture of meal and molasses Canned goods kept beautifully green by copper make an important addition to this display of the ingenuity of man, unrestricted by any regard for health

The results of the work in this line of investigation do not condemn the use of copper in greening peas, but emphasize the justice of the demand that artificially greened goods should carry a label announcing that fact and stating the character and amount of the added greening material The same remark may be applied to the data obtained by the work of the chemical division in regard to the use of antiseptics in the preservation of food The occurrence of salicylic, sulphurous, benzoic and boric acids is shown to be of wide extent, and attention is called to the fact that the medical fraternity and the people should be informed regarding the use of these preservatives If, then, the patient and his doctor prefer to use such foods, it is a question for them alone, the public has at least done its duty in relation to the matter

There is by no means unanimity of opinion among hygienists in regard to the effect on the human system of continued small portions of salicylic acid, copper, etc, as they occur in the food In fact, opinions on such subjects are of little value unless based on actual experiment At least one thing, however, is certain, viz, that no harm is done in letting the consumer know what he is eating

Every day a large number of chemists may be found busily studying some of these problems relating to foods, and physicians might spend a profitable hour in examining the character of the work

Distilled liquors, wines and beers are also analyzed for the jury of awards, and the final distribution of medals will rest largely on the results of these investigations

One of the very interesting facts of the work is found in the study of the olive oils which are on exhibition It is claimed by the producers of olive oil in California, that they have a powerful competitor in the cotton oil of our Southern States Much of this oil, it is asserted, finds its way to France, Italy and Spain and returns to this country under the guise of pure olive oil The examinations which have been made so far do not afford much comfort to the promoters of that rumor Even were it true, it is not at all likely that foreign exhibitors would place any such adulterated oil in competition There is no manner of doubt of the fact that a large proportion of the salad oil purchased in this country has had its origin in Mississippi and Texas, but such oils are not found to any great extent in Jackson Park masquerading as products of the olive

An important part of the work now in progress in the chemical laboratory consists in the analysis of cereals for the agricultural jury All those cereals—nearly 1,000 in number which have been adjudged worthy of competition by the jury have been sent to the laboratory for examination The weight per unit volume is first determined, whence the weight per bushel is calculated Next, the sample is ground until it all passes a very fine sieve After the removal by means of a magnet, of any iron dust which may have been mixed with the flour through abrasion of the steel mill, the nutrient value of the sample is determined by analysis The moisture, ash, oil, fiber, and albuminoids are determined by direct analysis and the starch by difference On the data thus obtained the food value is calculated For this purpose the percentage of moisture, ash, and fiber is deducted and the nutrient value calculated on the residue the relative values of the starch, oil and albuminoids being as 1 2,5 2 5 respectively On these data and the report of the experts on the commercial value of the samples the awards are made Space does not permit of a more extended notice of the work of this laboratory in food products Above have been mentioned only some of the more important of the investigations But in addition to these, nearly all the food products on exhibition in the Agricultural Building have been subjected to some kind of a chemic examination It is doubtful whether any other work, not strictly of a medical nature, which is carried on at Jackson Park has a more intimate connection with public health and State hygiene than that of the chemic laboratory

The work is under the direction of Dr H W Wiley, chief chemist of the Department of Agriculture of Washington Dr Wiley is himself a graduate of medicine, and while not sacrificing the promotion of agriculture in any way his medical training may be allowed some credit for the direction which the investigation in food products has taken

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Fair Emergency Hospital Work —Cases Cared for by Exposition Doctors and Nurses Since May 1 —While it is one of the most important institutions connected with the Fair little has ever been said about the work of the Emergency Hospital Under direction of Dr John E Owens the department devoted to caring for sick and injured people from the start has performed its duties most admirably The staff of assistant surgeons is composed of Drs W H Allport, N R Zeager, S C Plummer, and E J Edgerly, with J L Hillsmantel and W C Roughly as resident physicians, W H Gentles, Superintendent of Ambulances, and Miss M R Brown of St Luke's Hospital, head nurse She has at all times a corps of ten trained nurses under her command They are changed every month so as to give others an opportunity to see the Fair These nurses are selected from the best hospitals of New York, Pennsylvania, Massachusetts, Baltimore, Boston, Washington, Chicago, Philadelphia, Toronto, and other large cities Up to Sept 16th 13,765 patients had been treated Out of this number there were twenty deaths, three of them victims of the Cold-Storage fire The record of cases by months is as follows

May	2,621
June	2,966
July	3,292
August	3,169
September (16 days)	1,717
Total	13,765

The great number of cases in May is due to the fact that a great many workmen were injured in various ways The great majority of patients have, so the physicians say, been victims of indigestion, superinduced by irregular eating and change of diet On hot days prostrations were quite numerous July 4, with 170 cases, was the biggest day, and Sept 14, last Thursday, Ohio day, furnished 151 ambulance calls In May were 315, in June 406, in July 581, and in August 564

Increase of Alcoholism in Europe —According to the *Lancet*, June 24, the multiplication of deeds of violence among the Latin peoples of Europe, can be distinctly traced to use of stronger drinks In Southern and Central Europe the human subject is even more susceptible than the dwellers to the north, to the evil influences of alcoholic intoxicants Even the nationalities dwelling along the Mediterranean have, from this cause, during the last decade, raised the crimes of bloodshed to a figure quite appalling

Opening of the Chicago Medical Colleges —The Rush Medical College and the Chicago Medical College respectively held their opening exercises on Tuesday, Sept 26 The introductory lecture was given by Dr Norman Bridge at Rush Medical College, and at the Chicago Medical College by Prof N S Davis

Editorial Change —Dr F S Parsons has been appointed editor of the Philadelphia *Times and Register*, to succeed Dr A F Waugh Dr Parsons has been for many years a member of the American Medical Association and at the last meeting was secretary of the Section on Diseases of Children

Coroner of New Orleans —Dr G B Lawrason has been appointed coroner of New Orleans Parish by Governor Foster, to fill the vacancy caused by the death of Dr Seeman

There has been too much microbe hunting in Hamburg and too little attention paid to general sanitation

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from September 16, 1893, to September 22 1893

Capt Louis Brechemin, Asst Surgeon, is granted twenty three days' leave to take effect about September 17, 1893

Major Henry McElderry, Surgeon U S A is granted leave of absence for one month to take effect about October 1 1893

Capt Curtis E Price, Asst Surgeon, relieved from duty at Ft Wadsworth, N Y, and ordered to report to the commanding officer, Ft Porter N Y, for temporary duty at that post

Capt Wm C Shannon Asst Surgeon is relieved from duty in the office of the Surgeon General of the Army and as assistant to the attending surgeon, Washington, and will proceed to New York City, and report in person to the commanding general, Dept of the East for duty as attending surgeon and examiner of recruits in that city, relieving Capt Guy L Edie, Asst Surgeon

Capt H S T Harris Asst Surgeon U S A is relieved from duty at Ft Keogh Mont and assigned to duty at Ft Preble, Me

Capt M W Wood, Asst Surgeon U S A is relieved from duty at Ft Preble Me, and assigned to duty in Boston, Mass, as attending surgeon and examiner of recruits

Capt Francis J Ives Asst Surgeon ordered to proceed from Ft Sheridan Ill to Chicago, Ill, and report in person to Capt Louis A La Garde Asst Surgeon in charge of the medical section of the War Department exhibit, World s Columbian Exposition for temporary duty

Capt Guy L Edie, Asst Surgeon upon being relieved from duty in New York City by Capt William C Shannon Asst Surgeon, will proceed *to Washington, D C, and report in person to the attending surgeon* for duty in his office

Capt Wm G Spencer Asst Surgeon is granted six months' extension to sick leave of absence granted in S O 108, A G O, May 13, 1893

The Commission of the Surgeon General of the Navy —From one of the military service papers we learn that a fine specimen of the printer's art has just been turned out by the Government Printing Office, being the commission of Surgeon General J R Tryon, U S N. The commission is printed on vellum and is a beautiful piece of work In forwarding commissions to bureau officers care is generally taken that the document is neither folded or rolled, so that the "sheepskin" can be framed without showing wrinkles or deformations The commission of the Surgeon General will be signed by the President in a few days

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Circular

The Treasury Department has issued the following

Unlabeled baggage of steerage passengers, and unlabeled baggage of second cabin passengers from cholera infected ports or places, to be disinfected at the quarantine station for the port of arrival

Treasury Department Washington D C Sept 19, 1893

To quarantine officers of the United States, commissioners of immigration collectors of customs, steamship agents and others —Department circular No 65, May 4 1893, relating to the labeling of baggage and the issue of inspection cards to steerage and cabin passengers, provides that all baggage of steerage passengers destined for the United States shall be labeled at the port of departure, said label to bear the seal or stamp of the consulate or of the medical officer of the United States serving at the foreign port also, that the baggage of cabin passengers from cholera infected ports or places shall be likewise labeled Information has been received that occasionally pieces of baggage arrive without being labeled as above required

It is hereby directed that any piece of baggage, including hand baggage belonging to a steerage passenger not bearing a label as provided for in said circular, shall be disinfected by steam at the quarantine station for the port of arrival also that the baggage of second cabin passengers coming from cholera infected ports or places, not bearing the label as provided for in said circular shall be likewise disinfected by steam at the quarantine station for the port of arrival

In view of the difficulty of accurately inspecting each piece of baggage while on board ship at the quarantine, commissioners of immigration and custom officers are hereby directed to scrutinize the baggage of immigrants when landed at the immigrant station and should any piece of baggage including hand baggage be discovered to be without a label as above required they are directed to return the same to the quarantine of the port where said baggage shall be disinfected by steam and properly labeled with a certificate to that effect, before said baggage shall be allowed to pass into the United States

Charles S Hamlin, *Acting Secretary*

1893 Department No 141 Marine Hospital Service

LETTERS RECEIVED

(**A**) Atkinson, W B Philadelphia Alma Sanitarium Co Alma Mich Arend A Chicago Atkinson, E C, Colorado Springs, Colo (**B**) Bane W C Denver Col Barker A R Cleveland O Booth, C L, Low Moor, Va Brucker C M Tell City Ind Bloodgood D, Brooklyn N Y Berger L C Philadelphia Pa (**C**) Castle Wilmot & Co Rochester N Y Cordier A H Kansas City Mo (**D**) *Dios Chemical* Co St Louis Mo Durgin S H Boston Mass Dolliber, Goodale & Co Boston Mass Dixon W A Ripley O Daeuble Louis Allegheny Pa (**F**) Flandrau T M Rome N Y Flint Austin New York, N Y (**H**) Hare, H A Philadelphia Pa Hummel & Parmele, Philadelphia, Pa Hahn H H Youngstown, O Hoff, J W Pomerine, O (**L**) Lippincott J B Co Philadelphia Pa (**P**) Peck G S Youngstown O (**R**) Roberts J B Philadelphia, Pa Rogers F C, Milwaukee, Wis (**S**) *Sprague G P Boston Mass* (**T**) *The Tilden Company, New Lebanon N Y* The New York Policlinic New York N Y The J H Bates Advertising Agency New York N Y (**V**) Voldeng M N Independence Iowa (**W**) West H A Galveston, Texas Walker, J E, Brooklyn, N Y, Wesener, John A Chicago

The Journal of the
American Medical Association

VOL XXI CHICAGO, OCTOBER 7, 1893 No 15

ORIGINAL ARTICLES

INSANITY IN CHILDREN

Read in the Section of Neurology and Medical Jurisprudence, at the Forty fourth Annual Meeting of the American Medical Association

BY HARRIET C B ALEXANDER, A B , M D
CHICAGO
FELLOW OF THE CHICAGO ACADEMY OF MEDICINE, FORMERLY ASSISTANT SUPERINTENDENT COOK COUNTY INSANE HOSPITAL

Moreau (de Tours)[1] with equal force and truth, strikes at the grave psychiatric error involved in the denial by pediatrists, of intellectual, emotional and moral affections of physical origin in the child Such disordered mental phenomena were explained as immoralities, as eccentricities, or as the result of defective education and training From the time of the great physician of Cos, instances have been cited reversing these opinions Not, however, until school over-pressure became a burning question was the subject regarded as a topic of general medical interest The psychological state of the normal child even is much misunderstood Meynert,[2] with exceeding fullness and subtlety, thus outlines the evolution of psychological processes in the child

Kussmaul has shrewdly indicated certain perceptions and movements common to the fetus in utero, which feeds itself, as it were, by swallowing amniotic fluid He also indicates that there may be special motives, such as the more stimulating taste of the fluid after occasional depletion into it of the allantois, which induce swallowing Here, then, there are two alternatives, the fetus swallows or it does not swallow Fetal consciousness is already presupposed, which would exist, however, under circumstances that give but little opportunity for perception The newborn infant at once discovers signs by which it distinguishes between one set of perceptions and another One set of perceptions helps it to define the circumference of its own body, another set belongs to the world beyond it However obtuse this perception may be, though the child may at first not be able to discriminate between the various impressions of space still it is certain that the child's perception of its own body circumference is established very early Among other means by which it learns to distinguish between impressions received from its own body and the outer world are these contact of a strange finger with its own skin excites but one tactile sensation, contact between two parts of its own body excites two tactile sensations, one from the touching, the other from the touched part Furthermore, a number of strange auditory sensations strike the ear of a child, but only the sound of its own voice is accompanied with muscular sensations, and so the attendant muscular sensations help the child to discriminate between movements of its own body and any other movement it may see There is no order of movements, which, under the cover of instinct, can be pushed in between conscious and reflex movements The first instinct of a child would be the instinct for food, but the origin of that has been discussed There is absolutely nothing in the sensation of hunger which would acquaint the child with the means of remedying this pain It obtains naught but the concept of pain In the general restlessness it displays and in the convulsions ultimately resulting from anemia there is nothing which could be likened to an instinct for food If the child has not to depend on its own resources but has a nipple put into its mouth then the sensation thus excited starts the reflex mechanism of sucking The child has thus acquired the concept that the sensation of satiation is connected with the act of sucking, and these two sensory memories are associated with the innervation sensation aroused by sucking, and probably by the scent of the mother's breast That a child should suck at every finger may be attributable to a reflex mechanism, but the sucking of the child in dreams proves that the act of sucking has produced images which have been registered in the cortex The factors of this primary abstract ego are not definitely defined The nature of the ego does not depend upon any definite order of memories, but is determined simply by the most firmly fixed memories

As soon as movements of aggression have taught the child to take hold of things it is evidently under the impression that it is living in a world of sweets, it takes everything to the mouth and licks it A later aggressive movement—kissing—like the first sucking movements, is probably based upon the act of bringing an attractive object to the mouth This latter movement is clearly dependent upon a powerful secondary presentation aroused by its impressions, just as the sucking movements during sleep denote secondary presentations excited in the course of dreams Space vision in the child excites movements of aggression which aim at the possession of the thing it sees, but as it lacks the power of locomotion it has no conception of distance These aggressive reflexes of the upper extremities are no more coordinated in space than the movements of the eyes are before the child has learned to see, and through irradiation these movements become general, leading to a tossing of the whole body, to kicking with all fours and to cutting of grimaces These movements though extravagant are not spasmodic, but must be regarded as results of cortical impulses interfered with by cortical irradiation The acoustic nerve also takes part in reflex impulses, the child that hears others speak or perceives other sounds and noises has the desire to bring forth the same sounds and noises As its cortical functions improve, it develops the secondary idea that the sounds which it brings forth are similar to those of ordinary speech Wundt correctly remarks that the speech of animals consists of so-called sensory sounds, and this is true of children before they have acquired the faculty of imitating syllables In all aggressive movements the child over estimates the possibilities of its powers Experience and an improvement of the power of imitation correct these false conclusions As soon as the child has reached that age when all cortical fibers acquire their white substance, purely reflex movements and those due to irradiation diminish in number In the child the expression of emotion may vary much Under the influence of the apnœtic effect of functional hyperemia attendant upon pleasurable emotions, there will be movements of aggression bespeaking the force of the child's own personality, or there will be spasmodic movements of repulsion (due to irradiation) such as screaming and crying All these expression movements, whether due to irradiation or not, dispatch sensations of innervation to the cortex, which sensations are there turned into "special memories" and serve later on as impulses, starting the entire groups of movements which are involved in expression Consequently, these movements of expression result primarily from stimulation of subcortical centers, just as simple forms of reflex movements serve as the foundation upon which, the structure of more complex, conscious movements is raised As soon, however, as these irradiatory impulses, which excite the mechanism of expression, are put under control of an organ of motor coordination, they acquire secondarily a higher value as psychical factors of expression In the child, pleasurable emotions result in general movements of the entire body Even in the adult, who dances for joy or performs other extravagant movements, occurs a repetition of these primitive mimical movements of the child A state of excessive pleasurable emotions may pass into a condition of maniacal excitement as a result of dilatation of the arterial network of the brain, or a state of pleasurable confusion may end in a transitory swoon The doctrine that ideas are inherited and are not the result of perception and association, that movements, even mimical ones, are the result of innate motives and have nothing to do with imitation and early reflexes can hardly be applied to man Not even the upright gait is innate, it is acquired with difficulty only through imitation and cortical coordination

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[1] Folie chez les Enfants

[2] 'Psychiatry," Sachs' Translation

Dickson has found insanity in children characterized by subacute maniacal symptoms, garrulity or loquacity, or melancholiac depression associated with homicidal or suicidal tendencies The children are often bright, but irritable and wayward

As Perez has shown, anger appears very early in children In the first two months the child shows by movements of its eyelids and hands strong anger when the attempt is made to bathe it or to take something from it

According to Fenelon, jealousy is much more violent in children than is usually suspected Bourdin claims that all infants are liars He, however, ignores the fact that the weak inhibitions of the child prevent it from distinguishing clearly between the subjective and the objective—between its wishes and facts This condition is essentially one of mental instability and underlies the mental states at the foundation of terror and suspicion As might be expected, cruelty is very frequent in childhood Not from an innate tendency to cruelty *per se* as claimed by La Fontaine and Montaigne, but, because as has been shown by Meynert, the feeble secondary "ego" does not so dominate the primary "ego" as to enable it to recognize the feelings of others In certain cases this secondary "ego" is not developed, because of inherited, congenital or acquired defect or perverted training

Motor explosions, for reasons already pointed out by Meynert, readily occur in children, whence the fact noted by Dr Grace Peckham Murray[3] that neuroses in children tend to be motor rather than sensory, since the reflex arcs of which the motor strands form a part are earliest perfected, so that when a sensory stimulus sets free a nerve energy it is likely to overflow into motor paths Intellectual comprehension of sensation, and consequently of pain is the last to be developed, in consequence, severe nervous shocks which would give rise to exquisite pain in the adult, result in a motor neurosis in the child

Motor neuroses, as already stated, readily pass into the motor expressions of psychical disturbance, and from these psychical disturbances intensified by the feeble power of discriminating between the subjective and objective, result the hallucinations so frequently noted in children

The disturbance of the feeble ego results in the appearance in the mental foreground of the child, of cruelty, mendacity, and other primitive instincts Abulic speech, as Dr J H Kellogg has shown, may occur in the instinctive insanities of childhood from morbid tendencies to commit improprieties of speech (*American Journal of Insanity*, 1892)

The child, therefore, gradually acquires a series of checks on its explosive tendencies and the egotism shown in the over estimate of the possibilities of its powers These elements underlie the mental state of childhood, which, according to Moreau (de Tours)[4] is characterized by an absence of reflection and self-control, by spontaneous and capricious actions, by dominance of immediate sensory impressions and absence of regard for the future, by desire for power and tyrannical use of it In a study of these phenomena, classification becomes a necessity and the following modified from Moreau (de Tours), is an excellent basis for such study, especially if it be remembered that even the "pure neuroses" in childhood are often attended by mental symptoms The classification of the psychoses is based on Spitzka

- Neuroses
  - Convulsions
  - Nervous laughs
  - Nervous coughs
  - Hiccough
  - Stuttering
  - Neuralgias
  - Ecstasy
  - Hysteria
  - Chorea
  - Epilepsy
  - Somnambulism
- Psychic Types
  - Hallucinations
  - Anomalies of character
  - Aberrant sentiments
    - Love
    - Jealousy
    - Anger
  - Imperative conceptions
    - Pure,
    - Attended by impulsive acts
      - Arson
      - Suicide
      - Violence
      - Homicide
      - Alcoholism
      - Theft
      - Rape
      - Non criminal acts
  - Idiocy
  - Imbecility
  - Night terrors
  - *Mania*
  - Acute confusional insanity
  - Melancholia
  - Transitory frenzy
  - Stuporous insanity
  - Katatonia
  - Paranoia
  - Periodical insanity and hebephrenia

The imperfect coordination of the slowly acquired inhibitions is readily upset, whence occur states of uncertainty and resultant terror "Night terrors" were the earliest morbid mental phenomena noticed in children "Pavor nocturnus" described by Hippocrates was worthy the clinical insight of the great physician of Cos The emotion of fear, as Meynert has shown, characterized by greater excitement and attention, is probably the neurosis of a subcortical center (of the medulla) which defies cortical inhibition Movements of flight may therefore be started by allied associations in the absence of real danger, and even against the will this underlies the conditions found in "night terrors" and explains the running which so frequently precedes epilepsy in children, the so called epilepsia cursiva The motor elements in childhood's neuroses are therefore not so pure as they at first seem The sensory inhibitions which enabled the child to determine its own movements from those of others remain dormant, it is true, to spring to the surface in constitutional disorder, not as inhibitions but as sensory accessories

Among the earliest manifestations of morbid mental activity in children are hallucinations which depend on already registered perceptions Hallucinations of all the senses may occur, but those of sight are most frequent, next, those of hearing, while taste and smell but exceptionally occur These hallucinations are readily excited by simple causes, like indigestion, and are present in night terrors which are an intensification of the hypnogogic hallucinations that occur in many adults on awakening In many instances even moral agencies produce sudden explosions of mental disorder

The inherited tendencies of childhood predispose to these attacks As Clouston has shown, neuroses and psychoses not requiring hospital treatment are by no means uncommon in the "too sensitive" child with hereditary taint Children of this class take "crying fits" and miserable periods on slight or no provocation These tendencies are aggravated by the results produced by the maternal mental state The silly threats of mothers often cause such brief attacks He has seen a boy of five become intensely depressed, cry and moan for hours because of the "hell" which its mother described as the portion of bad boys who tore their pinafores, sinned against God, and disobeyed their mammas

In predisposed children, subjective frights and unpleasant dreams originate persistent anxieties and hebetude In such children, precocity, over-sensitiveness, unhealthy strictness in morals and religion for a child, a too vivid imagination, want of courage, thinness and craving for animal food are common characteristics These children are over-sensitive, over-imaginative, and too fearful to be physiologically truthful, and tend, under fostering, to be unhealthfully religious, precociously intellectual, sensuously artistic, and hyperesthetically conscientious He points out that what he calls "delirium of young children" is relatively frequent "In most cases it is a pure delirium, without consciousness, attention, or memory, but in some instances there are frightful hallucinations In others, an excited melancholia of short duration " "The same children who suffer from delirium at low temperature are those subject to 'night terrors' chorea, epilepsy, hysteria, and even adolescent insanity (hebephrenia) at later ages "

Krafft-Ebing state that "night terrors" are peculiarly frequent in neuropathic children

Dreams, somnambulism, and night terrors, according to C P Putnam,[5] find their explanation in a loss of the higher and exaltation of some of the lower cerebral functions The conscious life of the individual is in the realm of the higher functions, which exercise an inhibitory influence on the low

Steiner[6] believes that of the immediate causes of "night terrors" and the resultant states, the most important are a bad mental training, ghost description ere retiring, and going to bed in the dark, all of which are calculated to stimulate the lively intelligence of children already timid and excitable

In regard to the frequency etiology and types of the various psychoses and neuroses much variance of opinion exists The frequency with which chorea occurred among degenerates led to an expression of opinion that all choreic children were morally imbecile The question will, therefore, naturally arise as to the existence of degeneracy in the family of a given child "Degeneracy," according to Morel[7] the apostle of the doctrine, "is the result of a morbid influence, physical or moral An essential characteristic of degeneracy is hereditary transmission, but of a grave type and more far reaching in consequence than ordinary heredity " This factor plays an exceedingly important rôle in the disorders of childhood In infancy, are born errors and prejudices almost never uprooted, above all credulity Although impressions are mobile, still something remains therefrom for the future The child is dominated by the most pressing appetite and instability resembling that of the ape (as described by Milne-Edwards), or the hysteric is in the main uppermost in childhood Cabanis has shown that there is no moral distinction between the psychic life of the sexes in childhood at the outset Upon the power of acquiring checks, turns the after life of the child and this power is lessened by the cortical deficiencies due to degeneracy which also creates the predispositions to which reference has already been made Under "insane diathesis" or "insane temperament" has been placed a congenital predisposition most graphically portrayed by Dr C F Folsom [8]

> "It is closely allied to insanity and the neuroses, and at the critical periods of life is exceedingly apt to develop into one of them It is congenital or due to early interference with normal brain development It shows itself in childhood and infancy by irregularity or disturbed sleep, irritability, apprehension, strange ideas, great sensitiveness to external impressions, high temperature, delirium or convulsions from slight causes, disagreeable dreams and visions, romancing, intense feeling, periodic headache, muscular twitching, capricious appetite and great intolerance of stimulants and narcotics At puberty developmental anomalies are often observed in girls and not seldom perverted sexual instincts in both sexes During adolescence there are often excessive shyness or bravado, always introspection and self consciousness and sometimes abeyance or absence of the sexual instinct which, however, is frequently of extraordinary intensity The imitative and imaginative faculties may be quick The affections or emotions are strong Vehement dislikes are formed and intense personal attachments result in extraordinary friendships which not seldom swing around suddenly into bitter enmity or indifference The passions are unduly a force in the character which is said to lack will-power The individual's higher brain centers are not well inhibited and he dashes about like a ship without a rudder,

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[3] Journal of Mental and Nervous Diseases, 1884

[4] De la Folie chez les Enfants

[5] Keating's Cyclopedia

[6] Diseases of Children

[7] Traite des Degenerescences Physiques etc

[8] Pepper's "System of Medicine"

fairly well if the winds be fair and the seas calm, but dependent on the elements for the character and time of the final wreck Invention, poetry, music, artistic taste, philanthropy, intensity and originality are sometimes of a high order among these persons but desultory, half finished work and shiftlessness are much more common With many of them concentrated, sustained effort is impossible and attempts to keep them to it impossible Their common sense, perception of the relations of life, executive or business faculty and judgment are seldom well developed The memory is now and then phenomenal They are apt to be self conscious, egotistic, suspicious, and morbidly conscientious They easily become victims of insomnia, neurasthenic, hypochondriacal, neurotic, hysterical or insane, and they offend against the proprieties of life or commit crimes with less cause or provocation than other persons

At the same time that many of them are among the most gifted and attractive people in their community, the majority are otherwise and possess an uncommon capacity for making fools of themselves, being a nuisance to their friends and of little use to the world If such children could be placed in the hands of judicious and experienced physicians much better results could be obtained and the downward tendency might be stopped"

Among those beings termed by him the "neurotics" Dr E S Talbot[9] has found anomalies of the jaws and teeth exceedingly frequent Such stigmata of degeneracy were to be expected The "lithemic" child, of pediatrists, belongs but too often to this class, the lithemia being an expression of degeneracy Here, also, very often belong the infant prodigies like the two-year-old negro calculator described by Dr S V Clevenger,[10] and the host cited by Moreau de Tours Such precocity is a mental stigmata and, like early puberty appears so often among the degenerate as to give rise to the proverb, "a wit often is a fool at thirty" Shelley is an excellent instance of this 'insane temperament"

He was somnambulistic from his sixth year[11] From "very early childhood" he was an imaginative and restless child Trifles unnoticed by most children, seem to have made keen and permanent impressions upon him—the sound of wind, the leafy whisper of trees, running waters The imaginative faculties came so early into play that the unconscious desire to create, resulted in the invention of weird tales of legendary creatures, tales sometimes based on remote fact, in attempted delusion of neighbors and in the experience of more or less positive hallucinations His memory surprised many of his friends He delighted in "weird and somber tales of the supernatural and horrible" He was extremely desultory and careless in all his habits His room was a chaos of scientific instruments, chemicals and books "From thinking the best of friends and acquaintances he could of a sudden, and with insufficient cause, pass over to the other side and think the worst" Like all neuropathics he was easily hypnotized He was a great hypochondriac On one occasion, meeting a woman with large legs he was seized by the notion that she had elephantiasis and had infected him Medical examination demonstrated the falsity of this notion but it persisted for several days "One evening he actually arrested the dancing of a line of pretty girls proceeding to examine their arms and necks with such woebegone gravity that they were terrified and their angry partners silent" He suffered frequently from the topoalgias so frequent in neurasthenics and hypochondriacs His flagrant violations of social conventionalities were notorious Many of these, however, had, as Symonds has shown, logical bases from the Shelleyan standpoint of reaction against social tyranny not unnatural to a mind early subjected to the brutal "fagging" of English schoolboys and brutality of schoolmasters who found a "voluptuous ecstasy" in flogging boys ere entering on the "feast of reason, flow of soul" of a banquet whereat the flogger was the "genial, humorous" host Shelley however, violated his own code in a most capricious manner An avowed atheist, he took the sacrament in a blatantly audacious manner for interested reasons He reverted to fetichism and argued for the existence of ghosts He denounced legal marriage, but, married Harriet twice, once by the simple Scotch common law and once by the English church rite The constant nagging of his intriguant "sister in law" which drove Harriet into 'nerves" and him into home hatred, led to the estrangement of wife and husband The hysteric insensibility of the wife to her own children fostered this Shelley's temperament, however, aided this tendency He "took strange caprices, unfounded frights, vain apprehensions and panic terrors, and therefore absented himself from formal and sacred engagements" In a month after the English marriage he deserted Harriet and her unborn child, to elope with Mary Godwin Even Symonds, the most logically psychological of Shelley's analysts, fails to justify this act from Shelleyan principles In Shelley's case hereditary degeneracy existed He normally reacted against school tyranny, hence it alone does not account for the defects and peculiarities of his career

School training, however, may develop very similar states and wreck many a nervous system Such an acquired predisposition is singularly well illustrated in the lives of Margaret Fuller and George Eliot Margaret Fuller says[12]

'My father instructed me himself At the outset he made one great mistake, more common, it is hoped, in the last generation than the warnings of physiologists will permit it to be in the next He thought to gain time by bringing forward the intellect as early as possible Thus I had tasks given me as many and various as the hours would allow, and on subjects beyond my age, with the additional disadvantage of reciting to him in the evening after he returned from his office As he was subject to many interruptions, I was often kept up until very late, and as he was a very severe teacher, both from his habits of thought and his ambition for me, my feelings were kept on the stretch till the recitations were over Thus it frequently happened that I was sent to bed several hours too late, with nerves unnaturally stimulated The consequence was a premature development of the brain that made me an 'infant prodigy,' by day and by night a victim of spectral illusions, nightmare and somnambulism, which at the time prevented the harmonious development of my bodily powers and checked my growth, while later they induced continual headache, weakness and nervous affections of all kinds As these, again, reacted on the brain, giving undue force to every thought and every feeling, there was finally produced a state of being both too active and too intense, which wasted my constitution and will bring me—even although I have learned to understand and regulate my now morbid temperament—to a premature grave No one knew why this child, already kept up so late, was still unwilling to retire My aunts cried, 'Out upon the spoiled child, the most unreasonable child that ever was—if brother could but open his eyes to see it—who was never willing to go to bed' They did not know that, soon as the light was taken away, she seemed to see colossal faces slowly advancing toward her, the eyes dilating and each feature swelling loathsomely as they came, till at last, when they were about to close upon her, she started up with a shriek which drove them away, but only to return when she lay down again They did not know that when at last she went to sleep, it was to dream of horses trampling over her, and to awake once more in fright, or (as she had just read in her Virgil) of being among trees that dripped with blood, while she walked, and walked, and could not get out, while the blood became a pool and plashed over her feet, and rose higher and higher till soon she dreamed it would reach her lips No wonder the child rose and walked in her sleep, moaning, all over the house till once when they heard her and came and waked her, and she told what she had dreamed, her father sharply bid her leave off thinking of such nonsense or she would be crazy, never knowing that he himself was the cause of all these horrors of the night"

To these influences Emerson[13] rightly referred her later demonology, with its curious superstition and imperative conceptions He says

"Her childhood was full of presentiments She was then a somnambulist She was subject to attacks of delirium, and later perceived she had spectral illusion When she was 12 she had a determination of blood to the head 'My parents,' she said, 'were much mortified to see the fineness of my complexion destroyed My own vanity was severely wounded, but I recovered and made up my mind to be a fright and ugly' She was all her lifetime the victim of disease and pain She read and wrote in bed, and believed that she could understand anything better when she was ill Pain acted like a girdle to give tension to her feelings A lady who was with her through an attack of nervous headache which made Margaret totally helpless, assured me that 'Margaret was yet in the finest vein of humor, and kept those who were assisting her in a strange, painful excitement between laughing and crying, by perpetual brilliant sallies There were other peculiarities of habit and power When she turned her head on one side she alleged she had second sight, like St Francis These traits and predispositions made her a willing listener to all the uncertain science of mesmerism and its goblin brood which have been rife of late years' (1849) She had a feeling she ought to have been a man, and said of herself 'A man's ambition with a woman's heart is an evil lot' In some verses which she wrote 'To the Moon' occur these lines

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[9] Irregularities of the Jaws

[10] Alienist and Neurologist 1888

[11] These particulars are from the Lives by Dowden, Sharp, Symonds and Miss Sanborn

[12] Memoirs Vol i p 14

[13] Memoirs Vol ii

> 'But if I steadfast gaze upon thy face
> A human secret like my own I trace,
> For through the woman s smile looks the male eye

And she found something of true portraiture in a disagreeable novel of Balzac, 'Le Livre Mystique,' in which an equivocal figure exerts alternately a masculine and a feminine influence on the characters of the plot

The same tendencies are demonstrable in George Eliot Strongly skeptical and virile in type as was the intellect of George Eliot, her childhood was marked by phenomena of like causation to those already described in Margaret Fuller Like Margaret Fuller she had a father of ' extraordinary determination of character" Her mother was a "woman with an unusual amount of force" but of "ailing habit" George Eliot during childhood "suffered from a low general state of health and great susceptibility to terror at night," and the liability "to have all her soul become a quivering fear" remained during life She suffered from periodical depression which later gave place to migraine evidently of uric acid type, and often attended with rheumatoid phenomena She was "an awkward girl, reserved and serious far beyond her years, but observant and addicted to the habit of sitting in corners and watching her elders" Fear of the unknown in children, seemingly a reversion to the fear of the unknown of savages, tends like it to produce occult belief This has been pointed out by Emerson in the case of Margaret Fuller Despite the German rationalism of George Eliot, such fear found utterance in her "Beyond the Veil," a mystically occult contrast with her novels and with the Positivism which was her religion The philosophy of George Eliot should theoretically have effaced such mysticism, yet, as a survival of "night terrors," it came to the surface

Dickens teaches a lesson in school training eminently worthy of study when, in discussing the model school in "Hard Times," he says about the teacher

> "Ah! rather overdone Mr Choakumchild! If he had only learned a little less, how infinitely better he might have been taught much more He went to work in the preparatory lessons not unlike Morgiana in the ' Forty Thieves"—looking into all the vessels before him, one after another, to see what they contain Say, Mr Choakumchild, when from thy boiling store thou shalt fill each jar brimfull by-and-by, dost thou think that thou wilt always kill outright the robber Fancy lurking within, or sometimes only maim and distort him?"

The career of the modelly trained moral imbecile, "Gradgrind," is an apt illustration of the results of this system His case is one of the extreme results of school over pressure in which the struggle for marks before maturity more than equals in fierceness and intensity the struggle for good after it In certain respects this school over pressure checks even in well developed minds the transition from the terror of the unknown of childhood into the calmness of maturity Many morbid fears, imperative conceptions and acts, which torture the individual during an otherwise healthy career, unquestionably originate in the earlier periods of life

The treatment of the degenerate offspring of degenerate parents is one of the most serious problems which confront the physician Although the parents may be convinced of the necessity for extreme caution in the rearing of their children, their inhibitions are too weak to carry out the treatment decided upon In complete separation is the only hope of ever accomplishing anything by the training of the weak inhibitions of the degenerate and this course is practically impossible Degenerate mothers are excessively fond of their children after a maudlin fashion, and their egotism causes them to think themselves model mothers I have had such a mother consent to turn over entirely the training of her child to a person recommended by me, and yet at the first attempt of the companion to exercise authority over the child, the mother told the child to do as it pleased These children need a nourishing, stimulating diet, an outdoor life, regular hours and regular employment, in fact, they require the very life which is led by the healthy children of healthy parents, but which they rarely get unless one of the parents happens to be of sound mind and strong will and financially circumstanced to control the surroundings of the children

Dr W S Christopher, in a paper recently read before the Chicago Academy of Medicine,[13] has laid stress on the nutritional influences, active in the production of neuroses underlying psychic states, and these deserve more attention than they have received

Beside hereditary and the other predisposing causes cited already, Dr Welt very correctly has said that the etiological factors in the production of mental disturbances in children are injuries of the head, either during parturition or later, acute cerebral trouble and abnormal development of the brain, fright, masturbation and infectious diseases may act as predisposing elements Among the chief exciting causes are the fevers

Thore has shown that psychoses following acute diseases are of two classes, the first is met with during the development and the duration of the acute process itself, while the second class is found only during convalescence, or at least during an intermission of the disease The etiology, as well as the course and the issue in these two groups—the febrile and asthenic deliria—differ considerably

Kraepelin points out that in pathogeny of the febrile deliria the exciting cause prevails considerably over the predisposition, the causes of the disease are dependent upon somatic disturbances. Hence the monotony of the febrile deliria, the short course, and the nearly always favorable issue with the disappearance of the etiological cause, on the other hand, the predisposition of the individual forms the most important factor in the development of the asthenic form The lowered state of the system, depressed by the preceding fever and infection, exhibits itself more when the circulation is retarded during the decline of the fever, and the brain which may have suffered in its vitality by the preceding rise of temperature, is the first organ that reacts on the inadequate supply of blood, besides, there may be an influence of the infectious elements upon the central nervous system, either by affecting the ganglionic cells, or indirectly through a change of the blood by the microorganisms In the deranged equilibrium of the system even slight irritating influences, afforded by the events of daily life and frequently overlooked, may cause mental disturbances. In their course the asthenic psychoses resemble the mental derangements of spontaneous origin, and usually terminate in full recovery, with convalescence and better nutrition brain morbidity disappears. Dr. Sarah Welt advises that as a matter of prophylaxis, children after acute diseases, especially when in an anemic and poor condition, ought not to be allowed to leave the bed too early, and the action of the heart should be carefully controlled. Threatening spells of weakness ought to be prevented by administration of good nourishment and stimulants. In occurrence of deliria strict control of the patient becomes necessary, bed rest and a generous administration of alcoholics and heart stimulants. Against the irritable state of the brain, sedatives in result-giving doses should be used.

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[13] Medical Standard, Aug 1893

Dr. Kiernan states that the psychical manifestations of the febrile stage of any disorder are usually an hallucinatory delirium or acute confusional insanity. These may be agreeable in type. With a fall in temperature occur asthenic psychoses, characterized by visual and auditory hallucinations and their consequences. These are due to acute exhaustion of the nerve centers succeeding to considerable thermic oscillations. The mental symptoms of the febrile stage may aggregate temperature oscillations and in turn be aggravated.

Spitzka[14] finds that febrile and other acute disorders sometimes cause serious and incurable insanity usually combined with more or less arrest of development. This result is most apt to follow when some moral cause, such as a shock is superadded. From 10 to 30 per cent. of infantile insanity is attributable to the acute diseases of childhood, the overwhelming majority being sequelæ of the exanthemata (excluding cases followed by simple imbecility). Scarlatina, measles, typhoid and acute articular rheumatism are most to be dreaded in reference to their immediate mental sequelæ. Typhoid is especially deleterious. Nasse classifies the febrile insanities according to their period of development: *a*, coincident with the fever as to time and ranging from delirium to insanity; *b*, developing as an apparent aphasia and dementia. Spitzka found but 7 per cent. of his cases attributable to these causes. This low percentage was due to the fact that he did not include fatal cases nor ephemeral deliria, which in children, as Hughes and McBride[15] have shown, replace malarial attacks and which are benign, self limiting and not apt to come under alienistic care, like the more serious and protracted mental complications which may attain pseudo cretinism. Aside from an infrequent hallucinatory delirium, there is a continuation of the specific somatic disorder, so that a true convalescence can not be said to have existed. This is often associated with hyperthermia; *c*, developing during convalescence. These last, Spitzka[16] is of opinion, are different from the other two, are probably more benign and are anemic or adynamic. Spitzka states that sudden changes of temperature uncomplicated by other causes can produce transitory frenzy and acute delirious states. This is equally true of the extremes of temperature. Over exposure to the sun and exposure of the unprotected head of an infant to a hot stove have been declared responsible for the same acute delirious or furious outbreaks that Reich observed in children who, after long exposure to severe cold, suddenly entered a warm room.

Rapid cure of a maniacal delirium after the expulsion of ascarides in several cases proves, in Spitzka's judgment, that a parasitic etiology has been correctly assigned for these cases. These mental disorders are usually of acute type.

The parasites which have their seat low down in the bowel have a less direct relation to mental disturbance when, as in not a few cases, they provoke masturbation by the scratching of the anus they cause, or by wandering into the genital passages. The forms thus produced vary from the precipitation of hebephrenia to a stuporous insanity, or an acute hallucinatory confusional insanity of favorable prognosis.

As to frequency, Dr. Sarah B. Welt[17] remarks that insanity in the first ten years of life, aside from idiocy is very rare. Out of ten thousand inhabitants, Emminghaus found in Germany, between the first and fifth years, 0.18 per cent. insane; between the sixth and tenth years, 0.69 per cent.; and between the eleventh and fifteenth years, 1.46 per cent. insane. Debouttevillle, in France, found among the insane admitted to the asylum in Saint-You from 1827 to 1834, 0.9 per cent. between the fifth and ninth years; 3.5 per cent. between the tenth and fourteenth years; and 20 per cent. between the fifteenth and twentieth years. Turnham found but eight children less than ten years of age among 21,333 insane; idiots, who are far more frequent in number, not being included. The most common mental derangement in childhood is idiocy, be it congenital from insufficient development of the brain, or acquired from previous cerebral disease. Next in frequency is maniacal exaltation, while depression occurs only in late childhood. Insanity in childhood in her opinion occurs more frequently than is evident from the statistics. As no psychosis in childhood shows the entire complex of symptoms as in adults, it is readily understood that the symptoms of a mentally deranged child may often be taken to be bad behavior, and only the result, mental weakness, will be recognized.

The neuroses, properly so-called, are beyond the scope of this article. All of them may be accompanied by psychical symptoms. Hysteria, convulsions, ecstasy and chorea may occur in epidemic form especially during religious revivals. The child crusades were mixtures of these epidemics with psychical ones.

Epilepsy and hysteria in childhood as in adult age present their characteristic mental phenomena. Extreme cruelty, as in the case of the boy fiend, Pomeroy, may long be the only manifestations of the epileptic neurosis. In this age it is well to remember that as Griesinger has shown mental derangement often appears as moderate irritability, persistent or habitual. The child is passionately obstinate, quarrelsome, malignant, and even immorally inclined. Often this mental degradation is dubbed simple wickedness. It may occur as a simple, logical perversion with aimless, errabund tendencies, intellectual and emotional perversion with excitement. These children can not keep still a moment. They talk incessantly and incoherently, and are very inattentive. There are sometimes longer or shorter attacks of mania In children of from 3 to 4 years attacks of crying, of wild refractoriness, of striking and morbid destructiveness occur These may alternate with epilepsy, chorea, stupor, ecstatic cataleptoid states (simulating katatonia) The child may remain for hours or days as if quite absorbed, with open eyes, fixed countenance and peculiar position, sometimes breaking out suddenly into loud cries Hypochondriacal states develop in children of parents morbidly anxious about the health of their offspring

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[14] Amer. Jour. of Neur. and Psych. 1883.

[15] Med. Standard, Vol. iv. 1888.

[16] Keating's Cyclopedia.

[17] New York Medical Journal March 18, 1893.

According to Shaw[18], in children the ideas are simple, few and disconnected They are therefore incoherent because of an absence of organic associations between the residua The morbid phenomena are not systematized as in the adult, and the result is (according to Maudsley[19]) delirium rather than mania The morbid idea in the child's mind having little range of action acts downwards (Maudsley) on the sensory ganglia, causing hallucinations or giving rise to morbid impulses These impulses constitute impulsive insanity, called by Maudsley, monomania, and by Morselli, paranoia rudimentaria impulsiva

Under the head of monomania Maudsley places the epidemics of morbid ideas which have from time to time in the history of the world affected children The ruling instinct in a child of 3 or 4 is self-gratification, involved in which is a tendency to destroy what it dislikes Its insanity is manifested by perverse and unreasonable appropriations of whatever it sees, and by extreme destructiveness It suffers from the instinctive variety of moral insanity Maudsley describes a cataleptoid type of insanity resembling katatonia

The instability of childhood is shown in the presence of garrulity, melancholiac depression or excitement maniacal exaltation of the pleasant deliria type and instinctive tendencies Exaltation and delirium is usually contemporaneous with the beginning and acme of febrile attacks, while depression usually follows the disease The temperature at which delirium begins in a child is, as Clouston has shown, a good index of its brain constitution and temperament The temperature at which delirium sets in is lower in the sensitive Such children, independently of temperature, are subject to gusts of unreasonable elevation during which they are quite beside themselves, rushing about wildly, shouting, fighting, not really knowing what they are about, this coming on at intervals like the attacks of disease

Scherpf[20] finds that mania of sudden inception and furibund character is the most frequent acute type Melancholia often originates in hallucinations and has a tendency to hypochondriacal phases Katatonia may occur Impulsive monomania, paranoia, periodical insanity, and moral insanity are more frequent than the acute psychoses

In W A Hammond's[21] experience the most frequent type of insanity in children is mania, but insanity in children may occur as an affection mainly of the emotions or as characterized by blind and unreasoning impulses to deceit or violence Fixed delusions are not a prominent feature, but there are perverted feelings, indecency, destructiveness, malignancy toward relatives and hallucinations

Kiernan[22] agrees substantially with Clouston and Griesinger, but has noticed that hallucinatory types are relatively frequent

Hecker, Kerlin and Kohler find hereditary types of insanity in children marked by disagreeable variable temper, irritability, lack of self-control, morbid egotism, and often one-sided talent ideas of persecution at times, with impulsive and immoral tendencies

Kirchoff[23] finds that children whose ancestors have suffered from psychoses or neuroses, not alone become delirious from slight causes, such as digestive disturbances, slight fever, teething, etc , but are apt to be depressed for a long time after the ordinary disagreeable events of daily life Mental work at school rapidly exhausts them Fright and punishment excite them to a dangerous degree

According to Moreau de Tours, circular and periodical insanity in childhood resembles in all essential particulars the same psychosis in the adult

Pottier[24] insists that persecutional delusional paranoiac presents special characters in childhood They are wild, unsociable, inclined to solitude and isolation, somber and taciturn, defiant and suspicious, living apart from their comrades, regarding these last as scoffers, and already interpreting to their disadvantage the most insignificant event Such a delusional state may of course have the usual forensic results

Morbid jealousy may present itself at an early age and exercise a decidedly deleterious influence on the heart of the child Love, according to Descuret, explains the passionate attachment often displayed by little girls for dolls In the degenerate, romantic love may occur early Byron at the age of 8 was passionately in love with Mary Duff, a little girl of 10 The news of her marriage eight years later caused convulsive attacks Alfieri and Dante were similarly in love at 9 years Such early love must be regarded as morbid and an expression of degeneracy like precocity and early puberty In the cases reported, other evidences of degeneracy existed Like all precocity it needs restraint, not assistance Pathological anger is exceedingly frequent in childhood Imperative conceptions of all types occur Hughes[25] has observed pyrophobia in a boy of 6, who doused all fire with water Agorophobia, mysophobia, clitrophobia, etc also are relatively frequent

The discussion of the "imperative acts" following imperative conceptions involves many mixed states closely bordering on delusional conditions, from childhood's instability with regard to the difference between the subjective and the objective

With the increasing social tendency to expose children to financial and other mental stress at the critical period antecedent to puberty, suicides, insanity and criminality among children must, in the nature of things, increase In evidence of this, Moreau de Tours gives the following table

Years	15	14	13	12	11	10	9	8	7	Total
1861-65—	63	29	28	11	6	3	0	1	0	141
1866-70—	73	46	25	7	9	3	2	0	1	166
1871-75—	67	42	22	21	11	5	3	3	1	175
	203	117	75	39	26	11	5	4	2	482

In the last ten years forty-two boys and fifteen girls attempted suicide in Russia In the fourteen months ending December, 1891, 62 children committed suicide in Berlin, Germany The youngest had not reached the age of seven The percentage there is higher for the same reason which will increase it here, the increase of school over pressure The exciting cause of the suicide is usually a trivial one One boy killed himself to get rid of "so much dressing and undressing" No less than five attempts at suicide were made during 1887, by children under 14 years of age, resident in a Philadelphia district less than a mile square In three cases the attempts were successful In three of the five cases the moral epidemic nature of suicide was shown in the fact that one suicide was an exciting cause of two suicides and one attempt In all five cases, the approach of puberty had produced its usual emotional disturbance The immediate causes were, as in most child suicides, trivial Hanging was the favorite method, although one girl (who seems to have formed the melancholiac delusion that she had hanged one playmate who committed suicide) took laudanum She recovered from the poisoning and the melancholia St Louis has recently had a very similar epidemic Griesinger states that 6 10 per cent of the suicides in England are of children under 10 years Death does not inspire children with the same fear it does the majority of adults, and the weak ego is easily overcome by the dominant idea of suicide

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[18] Mental Pathology
[19] Manual of Insanity
[20] Jahrb f Kinderhl 1883
[21] Insanity
[22] American Lancet Vol VII
[23] Handbook
[24] Thése de Paris, 1886
[25] Alienist and Neurologist 1881

In dealing with the question of homicide it should be remembered, as Clifford Allbret[26] points out, that in children homicide is, as a rule, an unreflective act The act is in all probability imitative as a rule The child has heard of killing and of death but has no clear perception by reflection of their meaning Homicide by negro children is growing far from rare In two instances in 1892 two ten-year-old negro boys killed a baby brother to get rid of the trouble of minding it Moral imbecility may crop out here and in cruelty to animals Moreau de Tours[27] cites a case in which a four-year-old boy chopped at the face of a ten-months-old nursling Esquirol has observed a prematurely nubile girl of 8 years who had a fixed tendency to kill her stepmother Legrand du Saulle reports the case of a five-year-old boy addicted to masturbation from his third year who had long been noticed by his nurse to be wicked and vicious, who loved to torment younger children He liked to see chickens killed, ordinarily stupid, his intelligence was shown only in mischief Having noticed nosebleed follow the fall of his baby brother he felt an intense desire to see blood flow Profiting by the absence of the nurse he flung the baby down from a table Epistaxis resulted and he rubbed his hands gleefully in blood With complete indifference he answered in reply to all questions that the nosebleed amused him and he would repeat the deed This was also excellently illustrated in one of my cases

> The eight-year-old daughter of a hystero epileptic presented many of the symptoms of degeneracy Intensely cruel, she took delight in torturing those of a weaker nature than herself She was constantly calling the attention of a melancholiac to the screen in her window She knew how to induce the hysterical attacks of her mother and delighted in seeing the attacks although afraid of her mother at that time She delighted in the sight of blood She was a somnambulist Imperative conceptions had been demonstrably present for more than a year Like so many of these degenerates she had an intense appetite for meat

The crimes of Pomeroy, the "boy fiend" of Massachusetts who killed and tortured several small children, were later explained by the appearance of epilepsy, and other cases of children homicides have had like explanations The impulsive type can, of course, occur without epilepsy since the feeble 'ego" of the child is as easily overcome by the homicidal as by the suicidal impulse

Arson results as (Legrand du Saulle remarks) in maniacal, emotional and depressional states in dements, imbeciles and idiots It may also develop in girls ere puberty or as Marc has said, in child servants badly treated by masters and desirous of re-entering under the parental roof Nostalgia results Fire and flames are found to relieve this, whence arson Rape may occur from early precocity in both sexes in the degenerate Thefts often occurs from the same feebleness of the ego which results in homicide and suicide

Dr KIERNAN—There has been too great a tendency in latter days to put heterogeneous psychoses into the Procrustean bed of insanity It not infrequently happens that acute insanity is paranoiacal even when senile Such cases are frequently curable It very often happens that an old gentleman is locked up and regarded as incurable when some treatment would improve his mental condition With regard to the point raised about paretic dementia after sixty years of age, it is well known that there is an enormous number of such cases on record There has been a tendency to call that senile or latent paretic dementia I remember two cases in the same family which elucidates the point that paretic dementia in one generation may occur late and in the next one early In the cases I mention the father had it at 65 years of age and the son at 25 The various types need more than an ordinary line of demarkation and for that reason I am glad to see the subject brought up

With regard to the second paper, of course in a general way many of these mental phenomena in children pass unnoticed There is a great tendency to ignore mental symptoms of ordinary disease and under ordinary circumstances It shows a tendency in a right direction when we begin to study mental disorders resulting from various diseases

Dr FRANK T NORBURY—I was quite pleased to hear the presentation of the subject of mental affection in children I was associated for a time with a feeble minded institution, and having cases coming into the institution from three years up to about twenty, probably the oldest children being about twenty I had some very interesting cases under observation While most of them were cases of marked idiocy, yet there were many of them practically of recurrent insanity The doctor speaks of Dr Kerlin's observations It was in the institution of which he was the superintendent that I served a term and where I met three cases of special interest, all these cases were females and did not come under my special charge The cases of paranoia in childhood, that is those which I would class as paranoia, are probably not frequent but yet there were at that institution several, one of which had very thoroughly systematized delusions of persecution, and another one had some hallucinations at intervals accompanying these delusions I have had quite a number of children presenting epileptic insanity, and we received them in the Illinois institution I had one child 7 years of age committed as insane to the Illinois Central Hospital for the Insane, a boy who presented the symptoms of epileptic insanity quite similar to those of an adult We had several cases in one winter, but we have not at present any under 15 years of age

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[26] Tuke s Psychological Dictionary

[27] Homicide par les enfants

Dr Alexander—I do not know whether women doctors have a greater tendency to look into the domestic affairs of their patients, but I want to state a case that I met with recently I had a case of senile insanity on hand and had been warning the members of the family in which there were four married daughters who all had children, the family history being bad, about the care of the children An expert was called into the case and when the daughters questioned him, for I suppose I had aroused their fears, he said "Oh, no, there is no danger, you need not take extreme care of your children It is only the strong-minded who get insane anyway" I have lost my hold on that family I feel that it is a necessity in such cases for the physician when he comes into a family and finds this difficulty to warn the family about the care of the children Yet it is done almost never, where the family really should be warned about the care of their children The children are allowed on the street late at night, allowed tea and coffee that even healthy children should not have, and yet they have never been warned

SOME REMARKS ON INSANITY OF THE AGED

Read in the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY FRANK PARSONS NORBURY, M D
JACKSONVILLE, ILL
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The tenure of normal mentality in old age, depends on the sum total of vitality originally deposited and the maintenance of normal equipoise in the brain machinery during the years of active engagements in the affairs of life

The blending of the normal and abnormal mental states renders the psychological study of old age difficult, because what is the normal tenure of one approaches the abnormal change in another, the result is, as Clouston has remarked, "the psychology of old age has yet to be written" To the confusion arising from the differentiation of ordinary functional derangements from organic brain diseases, is due the difficulty of diagnosis and clinical classification, which must be experienced to be appreciated

In a clinical study of 196 cases of insanity, occurring in men over sixty years of age, coming under my care, I have been struck by the heterogeneous symptoms, yet similarity of mental affections, when modified by the influence of senility Senility seems to be more or less a common mold in which the mental disorders of the aged are cast, for the mark of the senile change is on them all It is because of the modifying influence of senility, causing variability in the tenure of normal mentality and confusion in abnormal manifestations of intelligence, that there is such a wide difference in the classification of the insanities of the aged In looking over the reports from some thirty prominent State institutions for the insane, I find it is, more or less, the rule to classify distinctive insanities of the aged as senile dementia While it is true senile dementia is the only characteristic alienation of the mind which in its uncomplicated form conforms more to a distinctive type than any other one form of insanity at any age, yet we must not forget that we have other types in the aged as much entitled to consideration, both pathologically and symptomatically, as senile dementia Indeed, all things considered, it seems to me that chronic cerebral atrophy, so often classed as senile dementia, is the most prominent type of senile insanity encountered in institution practice. It is deserving of consideration because it is seldom, if ever, given in hospital reports as a form of senile insanity, having a distinct pathology and recognized symptoms Its pathological difference from senile dementia lies in the nerve cells undergoing, primarily, a *parenchymatous* degeneration, while in the senile dementia there is to be found *infiltration* of the peculiar spider cells of which Lewis has spoken. It is worthy of mention just here, that to Lewis we owe much of the advance made in the pathology of insanity He says, regarding senile dementia and chronic cerebral atrophy, "that we are dealing with two obviously distinct affections of the nervous system

"In senile form we find the results of a general decline in the vital activities, the functions of nutrition, circulation and the respiratory activities diminished The blood is impaired in quality, diminished in quantity, and sluggish in its flow, and when we turn to the verdict of morbid anatomy the blood vessels exhibit diseased tunics, narrowing of their lumen tortuosity with attendant impairment of their resilience accompanying atheroma,—the tissue-elements universally, and the brain cells in particular, presenting fatty changes in their constituents, all indications of a senile retrogressive process

"Chronic cerebral atrophy presents a notable vascular change, but of a very different nature—a compensatory hypertrophy of the muscular tunic of the small vessels, especially emphasized in the cerebral arterioles, and very frequently associated with advanced atheroma of the large basal blood vessels. This hypertrophic condition is found in varying degrees in the kidneys, imperfect renal function being manifested in nearly all of these instances of chronic brain atrophy"

Other distinctive points in pathology are mentioned by Lewis, the pulse being especially important "The senile pulse presents a tortuous artery, unduly prominent and visibly mobile with each pulsation, giving a sphygmogram of exceedingly low tension, a vertical percussion up-stroke, an almost equally sudden collapse and a frequent diminution of the dicrotic wave varying with the endocardial and aortic conditions" In the pulse of the subject "of chronic cerebral atrophy the hardness is so marked that we have often to employ a pressure of 180 grams and with a large hypertrophied heart the pressure often has to be still further increased"

Lewis regards alcohol as a determinal factor in the production of chronic brain atrophy

We know that chronic cerebral atrophy does not, necessarily, exist in what is ordinarily termed the senile period, for it has been observed before the age of thirty, however, it is most frequently found beyond the age of fifty

The mental symptoms are those of despondency with suicidal tendencies, (a recent admission committed suicide within twenty-four hours after coming to the hospital), maniacal outbreaks are not uncommon, inhibited intellection especially amnesia, is marked, transient monoplegia is frequently noticed Vertigo is distressing in some cases and has led to confusion with Meniere's disease These symptoms are not unlike those encountered in paretic-dementia or cerebral syphilis, but are distinguished from them by other associated symptoms, especially of cardiac and renal origin Vertigo is quite noticeable as before mentioned and is probably due as Hirt says, "to the atheromatous condition of the arterial walls, and the consequent irregularities of the blood supply to the brain substance"

The melancholia of chronic atrophy is, we believe, dependent alone on those circulatory changes All have noticed in attacks of acute melancholia of the aged, where cardiac disease was conspicuous, the dependence of mentality upon the stability and regularity of the heart's action In a study of probably thirty such cases, during the past four years, I have satisfied myself that more than renal disease is necessary for the melancholia of cerebral atrophy, and that the circulatory changes are, primarily, the cause of such mental depression Again, the maniacal outbreaks of chronic cerebral atrophy with their explosiveness, incoherence and destructiveness may be of cardiac origin I have noticed, especially in cases complicated with angina pectoris, that the mania was very severe and distressing The fear of impending death, to be noticed in individuals not insane is, in the insane, transposed into hallucinations and delusions, destined to cause great mental disturbance

In the ordinary senile dementia we meet with destructiveness, filthiness and incoherence, the physical and mental helplessness being but the result of the progress of disease

The decline is gradual, the slowness of the atrophic process producing mental symptoms is, at first, regarded as but the natural result of old age, the amnesia, the sudden changes in moods and emotions, and the appearance of delusions being the evolution of distinct senile dementia

The minor details are familiar to you all, and cause you more or less anxiety in their treatment, especially at their homes It is the persistent wakefulness at night of such cases and their tendency to wander away from home, that ultimately leads their friends to have them committed to the hospital Here the career of helplessness goes on until death sooner or later closes the scene In brief, I have presented the characteristics of these two *distinct* mental diseases, having *distinct* symptoms worthy of more study from alienists, especially in their pathological differentiation, which is too much ignored

Another organic disease of the brain, however not frequent, but still it does occur after sixty years of age, is paretic dementia Steadman says that it rarely occurs after fifty, but I have, in the 196 cases of insanity occurring in men over sixty, found seven marked cases Mickle has observed that "owing to the brain strain and exhaustion of the over pressure and blood deprivation in modern life, general paralysis tends to occur at an earlier age than formerly" I may therefore look upon this series of cases as of rare occurrence I rather believe in the agricultural communities, from which most of my patients came, the longevity of such people may be considered as a factor in the cases I have observed Nothing out of the ordinary was noticed in the cases, except in the postmortem examination of one, the very thin skull was interesting, for it is usual, as Wood says, to find hyperostosis and exostosis on the skull This skull was so thin that objects could readily be distinguished through it

Syphilitic disease of the brain was observed in five cases, one made a good recovery, three died and one is still under observation The diagnosis of intracranial syphilis in the aged is difficult, but the symptoms, as outlined by Gray, have materially assisted me in making what I believe to be a correct diagnosis in the five cases above mentioned, the mental symptoms of course confirming my belief The suspicions and hallucinations being especially marked

General paralysis may occur beyond sixty years of age

Syphilitic insanity should not be confused with senile dementia, and the treatment of syphilitic insanity must be vigorously pushed in the aged to avoid chronicity

In conclusion, gentlemen, I would say that the differentiation of the insanities of the aged are too carelessly observed in our State hospitals for the insane, that the attention to their pathology is neglected and the observation of special symptoms ignored The recoverable attacks of mania and melancholia being too often classed as chronic insanity, and the recurrent attacks of mania and melancholia in chronic cerebral atrophy classed as acute insanity

We need more attention to the study of the science mind, and less politics in our institutions to bring them up to the standard of foreign hospitals

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BY THOMAS G MORTON, M D
PHILADELPHIA

Railroad injuries, from a surgical point of view, possess many features of interest, not the least of which is the medico legal question concerning the gravity or reality of alleged injuries for which pecuniary compensation is demanded

At a time when he least expects it, in these days of rapid transit and frequent travel, any individual may be obliged to witness, participate in or be the victim of a railroad accident attended by loss of life or by various degrees of traumatism—maiming, contusion or concussion, and every surgeon is liable to be called upon to render assistance to those injured or claiming to have been injured by such an occurrence Experience, however, has taught us to exercise special caution and to express a very guarded opinion as to the prognosis or gravity of a traumatism occurring under such circumstances Suits for damages are so common that the surgeon or physician almost instinctively recognizes these patients and governs himself in accordance with this fact, knowing that the attempt may be made to use him as a means of extorting large sums of money, indeed, he may even unconsciously become an innocent party to a conspiracy to defraud the railroad company defendant

Under such circumstances it would seem proper that we should consider this question, which, although largely medico-legal, is still more one of diagnosis calling for a high degree of skill to separate the genuine from the fraudulent claimants. I have prepared a brief resume of several recent cases which illustrate the tendency above referred to, but wish first to present briefly a few of the more prominent characters which distinguish this class of cases from ordinary surgical injuries. The most evident feature in these patients is a psychological one, arising from the prospect of receiving damages from a railway corporation by simple and easy means.

The fact that courts and juries are popularly believed to sympathize with the plaintiff in these trials, and the corporation defendant is popularly presumed to be guilty until proved to be innocent, has an undoubted effect in stimulating such litigation.

The number of persons in the United States annually claiming to have been more or less seriously injured upon railways is very great, many of these cases are beyond all doubt fictitious and fraudulent. Upon good authority it has been stated that English railways have paid, within a period of five years, upwards of eleven millions of dollars damages for spinal injuries alone. I believe that I am correct in stating that more or less exaggeration is present in nearly every case of railway injury. In the attempt to impress the court and excite the sympathy of the jury, very frequently the person claiming to be injured will go close to the border of imposition, even when he justly claims compensation for actual injuries. On the other hand, the willingness of railroad companies to settle such cases outside of court and to make prompt compensation for actual injuries, pain or loss of time, is so well known that designing persons attempt to take advantage of it, and cases of fraud and even actual conspiracy to defraud are not infrequent.

Prompt settlement for injuries can generally be made on more favorable and satisfactory terms immediately after the injury has been sustained, and in this way a molehill can often be prevented from growing into a mountain, because so long as the claim is unsettled, ill-health continues. In court, the possibility of permanent disability is always made a prominent feature, and every occurrence in the subsequent medical history of the claimant is apt to be traced back to the accident, as an effect to its cause.

Medical expert testimony is commonly conflicting, and the court and jury share the confusion and are embarrassed in arriving at a just verdict. Among the disturbing elements may be mentioned the fertility of the plaintiff's counsel in suggesting the dreadful possibilities of the future and his skill in painting them in lurid colors. Thus the surgical witness is often questioned concerning the possibility of cancer resulting from a contusion, or of displacement of the uterus, the development of tumors or of pelvic inflammation, all of these being the effect, perhaps, of a trivial injury whose external signs are transitory and insignificant.

Lateral spinal curvature has even been claimed to be caused in this way, which has been subsequently found to be due to congenital asymmetry of the lower limbs, as will be observed in two of the illustrative cases appended to this paper. Indeed, it would seem, in the opinions of some, that any of the ills which flesh is heir to may arise from railway injuries. The readily recognized maladies and deformities resulting from railway injuries are settled with less difficulty than cases of hysteria or neurasthenia. In these cases the symptoms, which are often purely subjective, commonly appear soon after the accident, and there is seldom any improvement while litigation continues, the injured person claims to have been in good health until the shock incident to the accident, and subsequently he is so impaired in health as to be able to attend to but little if any work of any kind. Continued nervous shock, insomnia, impaired vision and hearing, disordered alimentary and generative functions, hyperesthesia or anesthesia, general or spinal pain are prominent among the symptoms, which are indeed legion. It is not questioned that such traumatic neuroses may result from a railway shock, and without objective signs of injury, yet the increasing frequency of these cases without collateral evidence and the usual subsequent histories, naturally present the possibility of exaggeration, if not absolute fraud. At the same time such cases whether real or assumed, are very serious ones for the railway companies because of the difficulty experienced in obtaining the exact condition of the injured person, and also from the gloomy view frequently taken by the medical expert for the plaintiff, who, when pressed for an opinion as to the probability of ultimate recovery, considers complete restoration may be a matter of months or years, or the symptoms may be permanent. Generally nothing further is heard of these cases by the medical man after damages have been adjusted or a verdict rendered.

Much stress has been placed upon those injuries so-called “railway concussion” or “railway spine,” which may present no symptom immediately after the accident, but which later on develop the gravest conditions ending either in paralysis or death.

It is popularly supposed that “concussion of the spine” received in a railway collision differs from the same injury received in other ways. My colleague, Dr. Hunt, of the Pennsylvania Hospital, in which institution we have been associated for nearly thirty years, has justly said that it is absurd to give a peculiar pathological character to so called “railway spine.” That the injury occurs there is no doubt, that the medulla is seriously affected in the vast majority of cases there is very great doubt, yet the effort is constantly made to impress a jury that certain peculiar pathological results follow railway injuries and which can only be caused by such accidents.

Other structures of the spine besides the medulla are much more subjected to injury than it is, and their consequences often mislead both patient and doctor, especially the former. The ligaments and muscles are exposed to contusions, strains, ruptures and twists which are wrongfully attributed to concussion.

From these injuries, and from so called concussions the patient recovers rapidly or slowly according to their extent. If damages are looked for from a corporation, he is in a state of what may be called “*expectant pecuniosity*” and shows no amendment until the question is settled. Otherwise, he gets well, as those do who are injured but have no such expectations. There is a striking want of confirmation by postmortem examination of the terrible effects which are said to follow concussion of the spine. In fact, the records of such examinations are so few, notwithstanding the immense number of dementia or cerebral syphilis, but are distinguished from them by other associated symptoms, especially of cardiac and renal origin Vertigo is quite noticeable as before mentioned and is probably due as Hirt says, "to the atheromatous condition of the arterial walls, and the consequent irregularities of the blood supply to the brain substance"

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Under such circumstances it would seem proper that we should consider this question, which, although largely medico-legal, is still more one of diagnosis calling for a high degree of skill to separate the genuine from the fraudulent claimants. I have prepared a brief resume of several recent cases which illustrate the tendency above referred to, but wish first to present briefly a few of the more prominent characters which distinguish this class of cases from ordinary surgical injuries. The most evident feature in these patients is a psychological one, arising from the prospect of receiving damages from a railway corporation by simple and easy means.

The fact that courts and juries are popularly believed to sympathize with the plaintiff in these trials, and the corporation defendant is popularly presumed to be guilty until proved to be innocent, has an undoubted effect in stimulating such litigation.

The number of persons in the United States annually claiming to have been more or less seriously injured upon railways is very great, many of these cases are beyond all doubt fictitious and fraudulent. Upon good authority it has been stated that English railways have paid, within a period of five years, upwards of eleven millions of dollars damages for spinal injuries alone. I believe that I am correct in stating that more or less exaggeration is present in nearly every case of railway injury. In the attempt to impress the court and excite the sympathy of the jury, very frequently the person claiming to be injured will go close to the border of imposition, even when he justly claims compensation for actual injuries. On the other hand, the willingness of railroad companies to settle such cases outside of court and to make prompt compensation for actual injuries, pain or loss of time, is so well known that designing persons attempt to take advantage of it, and cases of fraud and even actual conspiracy to defraud are not infrequent.

Prompt settlement for injuries can generally be made on more favorable and satisfactory terms immediately after the injury has been sustained, and in this way a molehill can often be prevented from growing into a mountain, because so long as the claim is unsettled, ill-health continues. In court, the possibility of permanent disability is always made a prominent feature, and every occurrence in the subsequent medical history of the claimant is apt to be traced back to the accident, as an effect to its cause.

Medical expert testimony is commonly conflicting, and the court and jury share the confusion and are embarrassed in arriving at a just verdict. Among the disturbing elements may be mentioned the fertility of the plaintiff's counsel in suggesting the dreadful possibilities of the future and his skill in painting them in lurid colors. Thus the surgical witness is often questioned concerning the possibility of cancer resulting from a contusion, or of displacement of the uterus, the development of tumors or of pelvic inflammation, all of these being the effect, perhaps, of a trivial injury whose external signs are transitory and insignificant.

Lateral spinal curvature has even been claimed to be caused in this way, which has been subsequently found to be due to congenital asymmetry of the lower limbs, as will be observed in two of the illustrative cases appended to this paper. Indeed, it would seem, in the opinions of some, that any of the ills which flesh is heir to may arise from railway injuries. The readily recognized maladies and deformities resulting from railway injuries are settled with less difficulty than cases of hysteria or neurasthenia. In these cases the symptoms, which are often purely subjective, commonly appear soon after the accident, and there is seldom any improvement while litigation continues, the injured person claims to have been in good health until the shock incident to the accident, and subsequently he is so impaired in health as to be able to attend to but little if any work of any kind. Continued nervous shock, insomnia, impaired vision and hearing, disordered alimentary and generative functions, hyperesthesia or anesthesia, general or spinal pain are prominent among the symptoms, which are indeed legion. It is not questioned that such traumatic neuroses may result from a railway shock, and without objective signs of injury, yet the increasing frequency of these cases without collateral evidence and the usual subsequent histories, naturally present the possibility of exaggeration, if not absolute fraud. At the same time such cases whether real or assumed, are very serious ones for the railway companies because of the difficulty experienced in obtaining the exact condition of the injured person, and also from the gloomy view frequently taken by the medical expert for the plaintiff, who, when pressed for an opinion as to the probability of ultimate recovery, considers complete restoration may be a matter of months or years, or the symptoms may be permanent. Generally nothing further is heard of these cases by the medical man after damages have been adjusted or a verdict rendered.

Much stress has been placed upon those injuries so-called "railway concussion" or "railway spine," which may present no symptom immediately after the accident, but which later on develop the gravest conditions ending either in paralysis or death.

It is popularly supposed that "concussion of the spine" received in a railway collision differs from the same injury received in other ways. My colleague, Dr. Hunt, of the Pennsylvania Hospital, in which institution we have been associated for nearly thirty years, has justly said that it is absurd to give a peculiar pathological character to so called "railway spine." That the injury occurs there is no doubt, that the medulla is seriously affected in the vast majority of cases there is very great doubt, yet the effort is constantly made to impress a jury that certain peculiar pathological results follow railway injuries and which can only be caused by such accidents.

Other structures of the spine besides the medulla are much more subjected to injury than it is, and their consequences often mislead both patient and doctor, especially the former. The ligaments and muscles are exposed to contusions, strains, ruptures and twists which are wrongfully attributed to concussion.

From these injuries, and from so called concussions the patient recovers rapidly or slowly according to their extent. If damages are looked for from a corporation, he is in a state of what may be called "expectant pecuniosity" and shows no amendment until the question is settled. Otherwise, he gets well, as those do who are injured but have no such expectations. There is a striking want of confirmation by postmortem examination of the terrible effects which are said to follow concussion of the spine. In fact, the records of such examinations are so few, notwithstanding the immense number of those who have claimed to have the injury, that the skeptics are somewhat justified in attributing the few cases which have shown great pathological changes in the cord and in its membranes to the coincidence of disease, as myelitis or syphilis, or to much graver injuries than concussion

I may say, after looking back upon a very large number of cases of railway injuries, real, exaggerated or feigned, upon which I have been called to give an opinion that I am not conscious that any injustice has been done in a single case On the contrary, where the claimant was judged to be a malingerer, or that fraud was attempted, the subsequent history of the case has been such as to strengthen and confirm the opinion, and on several occasions, the attempt at fraud has been confessed or the conspiracy revealed

At the present day the simulation of disease can rarely be successfully carried on, provided the medical attendant makes use of modern means of diagnosis and is familiar with the symptomatology of the feigned disease Instruments of precision enable us to attain accuracy of observation, which very promptly enables us to recognize such cases, so that fraud is detected with more certainty and its character made manifest to court and jury Impostors, therefore, are less likely to enter suit when they know that it will be contested by the railroad company and the actual state of the case brought out in testimony

In many cases, settlements are declined and consequently a defense must be made by the railway corporations, or the treasuries might at once be opened unrestrictedly to all applicants, in view of the possibility of a settlement being refused, it is important for the railways to secure, not only an examination of the injured person soon after the accident, but also an examination before the trial, such evidence may reduce a verdict, or even obtain one for the defendant Juries, however, usually sympathize with the plaintiff and can hardly be said to carefully weigh the evidence when their sympathies are aroused by the plea of mental and physical suffering or by the sight of bodily injury or deformity which is always made as prominent as possible A common method, it is said, of arriving at the proper amount of damages, is for each juryman to name his idea of the proper sum to be awarded, and these sums to be added together and divided by twelve to get the result In some instances it would seem that the last step (of dividing by twelve) had been omitted

Occasionally the gallantry of a jury is not appealed to in vain in a recent case, a husband was killed upon a track where it was shown he had no right to be Although it was agreed that the widow had no legal claim, a sentimental appeal was made simply for the widow to the jury, who gave her a verdict of $1,200 The foreman of the jury was subsequently asked how it was that such a small sum was given, when, if the widow had any claim at all, the verdict should have been at least $5,000 He replied that it was concluded that the widow could get along at least two years on $600 a year, and then, as she was good looking it was probable that she would be married, and have some one to look after her

Finally it is a curious commentary upon human nature, or honesty, but it also affords an additional argument for prompt settlement—it is commonly noticed that no matter how long the plaintiff has been a helpless invalid while the claim was pending, as soon as the settlement is made and the money paid over, he improves in health to a marked and sometimes miraculous degree

Out of the many cases I have selected the following, which are sufficient to illustrate the points which I wish especially to submit for discussion and which may be taken as representative of the entire class

In the suit brought by the driver of the coach in which said Smith was injured, he got a verdict of $6,000 We got a new trial and paid $4,000 in settlement He claimed injury to spine I afterwards saw him running across Independence Square as swiftly as a deer and as straight as an Indian

Several of the cases (4, 5 and 7) reported occurred in the service of the Pennsylvania Railroad Company, and in these the examinations were made conjointly and the opinions formulated with my associate, Prof William S Forbes of Philadelphia

Case 1—Conspiracy to recover damages from the Philadelphia Traction Railway Company for injuries self inflicted

Henry S , a young man, was standing on the platform of a Philadelphia traction car and was thrown off while rounding a curve at 5 30 in the afternoon of May 16, 1890 The lad was picked up, found to be considerably injured, and was taken to the Jefferson College Hospital, where it was found that he had sustained a fracture of the left humerus

The reports of the conductor and passengers showed that the lad was told to take a proper position, and to be on his guard at the rounding of the curve, and that there was nothing to cause him to be thrown off, as the car was about stopping This led to suspicion and an investigation, and the following was discovered

Harris P and Passa P , his son, aged 16 years, and Henry S , his son in-law, met and adopted a plan to swindle the railway corporation and concluded that one must be injured by an accident due to jerking of the car After some argument the lot fell to the son in-law, Henry S , to fall off the car on the date mentioned Henry S got on the car, stood on the back platform, and as it rounded the curve (the place agreed upon) he placed his back towards the sidewalk and deliberately stepping backwards, rolled off It was also discovered that the plaintiff had secured witnesses to observe the accident , the jealousy and cupidity of these persons divulged these facts on account of the large sum of money the plaintiff expected to receive

It was also found that Passa P , the son of the originator of the conspiracy, was present at the scene of the accident, awaiting its occurrence, and reached the hospital before the injured man arrived This led to the arrest, trial, conviction and imprisonment of the three conspirators

It was subsequently learned that Harris P , the father, had been convicted of similar crimes in Russia, and that the three had swindled other corporations in Philadelphia

Case 2—Conspiracy to defraud the Traction Railway Company

The[1] trial of the action in this case was brought by Nicola Flore against the Philadelphia Traction Railway Company to recover damages for personal injuries received, which injuries, it was alleged, were of a permanent character , a lateral curvature of the spine having resulted, and necessitated the wearing of a plaster jacket by Flore

The defense was that the claim was fraudulent and a conspiracy to defraud the company

Dr Wm Pepper, Dr Thomas G Morton and Dr Horatio C Wood were called by the defence, and taking Flore from the court-room into an ante room, they made a physical examination of his condition, first cutting from him the plaster jacket which he wore At the end of the examination they came back into the court-room and testified that they found a congenital shortening of one leg, a scar from a wound on the back near the left shoulder, and that with these exceptions there was nothing the matter with the man at all

They further testified that while making the examination they subjected him to certain tests, as to the location of pain etc , and found from his answers that he was feigning As to the plaster cast jacket, they said that, while in some instances such an appliance might be of use, there was in this case not the slightest particle of necessity for the man's wearing it

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[1] Philadelphia Ledger November 23 1892

On behalf of Flore, a counter-conspiracy on the part of the Traction Company was alleged The counsel for the plaintiff in arguing the case for Flore to the jury, urged them to give his client $10,000 damages, while the counsel for the defendant, on behalf of the Traction Company, suggested that the jury should give Flore $50,000, the amount of damages originally laid, or, believing him to be a fraud, should give him nothing

The court, after defining the law, said "It is charged here that this case has been manufactured, that the injury has been greatly exaggerated, that the plaintiff, with the assistance of others, has attempted to deceive you and to pretend that that which was really but a trifling hurt, was in reality a permanent injury, affecting him for life If you believe that, of course your verdict ought to be for the defendant, because a man who will grossly and deliberately violate his oath and swear falsely to you intentionally, ought to be disbelieved entirely, and he is getting off very well if he goes out of court with the verdict against him It is a case for your common sense, apply it to it'

The jury, after a deliberation of about ten minutes, rendered a verdict for the Traction Company

Case 3—Trifling or simulated injury greatly exaggerated Erichsen's railway spine claimed to have resulted

Arbitration unanimously awarded a verdict for the defendant, appeal and trial before jury, who with exactly the same evidence gave a verdict for the plaintiff, an appeal to the Supreme Court and a new trial, amicable settlement effected

Mr A, a resident of Pennsylvania, stated that about 10 A M, in May, 1891, while seated in a car looking out of a window, when his body was partly turned, a sudden coupling of the cars jerked him backwards, twisting or spraining his spine He immediately rose in his place and exclaimed, 'My God, my back!'" At this time he said that he had a pain, as though something pierced him, in the small of the back, that his speech stopped to a certain extent, and became very jerky He continued his journey when the cars started in a couple of minutes or less, and on arriving at his home at noon he changed his clothing, ate his dinner, and in the afternoon went to work as usual While at work planing, his back hurt him so much that he had to quit work several times He worked several days before going to a physician, and on doing so received a strengthening plaster which he applied to his back, and continued to work, off and on, until February or March of the next year In October previous, he had applied at a general hospital for rheumatic pains

Finally a claim against the railroad was brought for a large amount of money for permanent injuries Mr A testified at the trial that he had suffered pain from the moment of the accident, that he had not the proper strength in his arms, that sleep was interrupted, there were tender spots on his back, etc The medical testimony offered by Mr A showed that his walk was impaired, he had terrible pains in his head, he was nervous and irritable, he had a swelling over the small of the back on one side, the spine was rigid as though it were a piece of solid steel, there were terribly contracted muscles, a peculiarity of speech, a jerking of his voice when attempting to speak, that when he attempts to lift his arms above a right angle with his body, he can not speak at all, that for many weeks he did not recognize any one, that he had been insane, unable to lie in bed, only on the floor, had lost control of bowels and bladder, etc In answer to a question, his medical attendant stated that he was suffering not only from hysteria, but from Erichsen's disease, or railway spine, and that he had been seriously and permanently injured by the sudden twisting of his back

An examination of the plaintiff, with Dr Charles K Mills, discovered that, although a neurotic, yet he was unquestionably a malingerer of the most pronounced type He had previously been treated for lumbago, and he had lost much time from his trade as jobbing carpenter on this account There was no evidence of spinal lesion, or that so called concussion of the spine had occurred There were some symptoms which might charitably be assigned to hysteria, but his jerky speech was purely simulation, and he attempted to deceive while testing his hearing He was of neurotic ancestry, and some of his relatives had been insane His general standing in his community was not high The settlement of the case was left by agreement to arbitrators who, after a very protracted inquiry, taking every particle of evidence obtainable, gave a verdict for the railroad company An appeal was taken from that result and the case was tried in court, and the jury, with exactly the same evidence, gave a verdict for $19,800 The company appealed and was granted a new trial, before which time came round, however, a settlement was made in full for $4,500

Case 4—Successful suit for personal injuries of alleged permanent character, plaintiff's wife subsequently confessed to a conspiracy and the entire case a fraud

W H was a passenger in a car which was thrown off the track and partly turned over by the spreading of a rail, immediately after the accident he was able to walk about, was at no time confined to his bed, and on the second day afterwards, he drove in a buggy some ten miles to see a physician Suit was afterwards brought for his injuries, and five months after the accident, an examination being allowed, the following report was made

W H stated that he had, at the time of the accident, received a wound of the thumb and also an incised wound of the ear, he also stated that a part of the seat of the car was pressed in upon his right groin His physician, who was present at our examination, stated that there had been a partial fracture of one rib, also that the patient had suffered from hemorrhages from the lungs, with some purulent discharge at such times, that there was incontinence of urine, which necessitated the frequent use of the catheter, that the testicles had been injured, that there was abdominal dropsy, as well as general dropsy of the extremities, and that he was suffering from injuries which not only had seriously compromised life but that he was also permanently injured

Upon examination, H was found to be 46 years of age, a very large man, well developed, weighed perhaps 225 pounds, he was sitting downstairs when we arrived, readily got up out of his chair, and walked without assistance or effort to the second story for our examination

The incised wound of the ear and the thumb had healed with a slight scar, the joint of the thumb had evidently been opened, for complete ankylosis had resulted There was no other evidence of injury about him, and on our asking his physician to point out the site of the partial fracture of the rib he was unable to locate the injury, and when he indicated as about the place, the latter was not where any rib existed, in other words, it was to the sternum our attention was called

There was no effusion into the abdominal cavity, nor was there any swelling or dropsical condition of the limbs There was no evidence of any lung or heart trouble In regard to the incontinence of urine, the only appearance which would sustain this was the presence of a wet spot upon the patient's shirt, but the usual indications found in incontinence were absent, in other words, there was no urinous odor about the parts, no soaked appearance of the penis and scrotum, no irritation about these parts incident to the constant presence of urine—the mouth of the urethra was normally dry With forced inspiration and expiration the testicles were elevated and depressed normally, they were of normal size and properly located, nor was there any evidence of their ever having been injured, no adhesions such as would be present had there been any local inflammation as a result of injury, the scrotum was normal The patient was apparently very sensitive to the least examination of the testicles, and complained of intense pain with the slightest examination by finger pressure When the chest and abdomen were examined by percussion (which presented no variations from the normal state) the results showed no evidence of variation from health

Conclusions The statement that the patient has from time to time more or less severe hemorrhages from the lungs and stomach is not borne out by examination, for it would be impossible for him to have such a condition without more or less disease which could be ascertained If he has any such loss of blood, it certainly is from the post nasal region and quite innocent in character, and the appearance of the discharge he is said to have would favor this view, because it is clotted and the associated discharge said to occur is probably nasal and throat mucous In other words, there is no evidence of any pulmonary or cardiac disease, which must be present to warrant any other view

There may have been some bruising of the groin, but, if such an injury did take place there is no evidence of it at this time The internal abdominal organs are normal, and the fact that the patient and his physician have been in error as regards the dropsy of the abdominal cavity and the limbs shows conclusively that a great mistake in diagnosis has been made

There are no symptoms present which indicate any permanent injury of any organ or part—in time he will unquestionably be restored to his usual health, except the ankylosis of the thumb, and some trivial scars, and further the examination warrants the belief that the case is an unmitigated fraud

The jury rendered a verdict for $16,000, and the court promptly decided to grant a new trial, or a reduction of the verdict to $10,000, the latter was accepted, and paid by the company

A year or so subsequent to the settlement, the wife of the plaintiff voluntarily came to her husband's counsel who communicated her statement to the counsel for the Pennsylvania railroad company, that her husband received only trifling injuries in the accident, that he worked for a week afterwards at his usual vocation—a butcher, peddling through the streets—and that he then conceived the idea of making a claim against the company, that he had none of the troubles which he swore to having on the trial, and that he did not dare to call her as a witness because she would have sworn that his testimony was untrue She further stated that he was not impotent, having had sexual relations with her four times during the week the trial was going on, and was also discovered with the housemaid, that he had entire control of bladder and rectum, that the blood he said was expectorated, was brought to him from the butcher, that soon after receiving the payment from the company, he went to Scotland and had not been seen since

Case 5—Lateral spinal curvature claimed to have resulted from injury, but was demonstrated to be due to asymmetry of the lower limbs

Mrs L aged 36, claimed that while sitting reading in a car she received a sudden jar induced by the coupling of a car to the rear of the train, by which she was thrown forward, striking her forehead against the frame of the window No other passenger was injured When she was examined by a surgeon soon after, no evidence of injury was seen except a slight wound on the forehead After reaching her home, some hundred miles further on, she was attended by her family physician, who stated that he found her suffering with sick stomach and severe pain extending down the spine to the sacrum These symptoms continued, the spinal pain subsequently became paroxysmal, and later on a lateral curvature was discovered, the patient, however was up and about, and gained in flesh She claimed that either walking or working aggravated the spinal pain, but she considered herself, on account of the spinal curvature, a confirmed invalid

An examination was made in 1889 for the railroad company by the late Prof Henry H Smith, who reported that

"The patient was found in bed, where she says she has remained since the accident, objective symptoms—a slight scar is apparent on the forehead, limbs are full and round, and her weight probably 170 pounds, pulse variable, showing nervous excitement, skin has a healthy color, temperature and reflexes normal, no nerve lesion Lateral curvature of long standing, possibly has been unknown to patient, physician or friends, but has no connection with the accident," and the opinion was given that the case was one of hysteria with some neurasthenia

Subsequently the claim for damages of $20,000 was supported by affidavits from various parties, among whom were female friends who testified that they had seen her dressed and undressed prior to the accident and that they had never noticed any spinal curvature and that after the accident she walked one-sided, and badly One affidavit from her pastor stated that she was "a woman of fine character and a member of his church in good standing, and the mother of five small children" A medical man testified in regard to the plaintiff "that he had never heard or seen any spinal trouble, any curvature of the spine, her walk and carriage was always straight, erect, and without trouble, nor did she have any curvature of the spine until the railroad accident"

Some months after this, Dr Smith sent in another report with his reasons in opposition to the claim that the lateral spinal curvature was the result of the accident, which condition was the principal injury for which damages were claimed This report acknowledged that a lateral curvature existed but that it certainly developed early in life, that there was no instance on record of such a curvature having developed in a few weeks by an mechanical violence whether applied through collision of cars or other force, and the creation of lateral curvature by a sudden force applied to a fully ossified vertebral column is a physical impossibility, numerous surgical authorities were quoted in support of this view But the presence of the curvature was not satisfactorily accounted for, and suit was pressed

Dr Smith died in March, 1890 As the trial was imminent, another examination was requested and allowed The patient was found to be in a fair condition of health but the main source of complaint was the curvature of the spine, which it was alleged caused pressure upon the spinal nerves and a general weakness of the extremities, and generally of all the functions

Mrs L was after much persuasion induced to permit a thorough examination of her spine, her back from her head to her heels was exposed As she stood with her back towards the window, a lateral curvature was at once observed, but at the same time the line of the nates was found oblique, and the gluteo-femoral fold of right side was much lower than on the left side, showing at once that asymmetry of the lower extremities existed, which fully accounted for the curve The right lower extremity was raised by placing books under the heel so as to equalize the limbs and the right was found to be one and one quarter inches shorter than the left With this correction of the asymmetry, the curvature vanished, and not a trace of the deformity could be found

The plaintiff's medical attendants were then convinced that the curvature was a condition of early life, and had no relation to the accident, yet nervous shock, lost time and wound of forehead were deemed sufficient to claim damages and suit for $15 000 was pressed

Just before the trial, a settlement for $2,500 was effected The plaintiff, who came walking into the room on crutches and markedly lame to receive a check and sign a release, immediately after this, got up, walked out without the crutches and without any lameness, shortly after this she was married and up to last accounts was in good health

Case 6—Action against the Philadelphia Traction Railway Company for $10,000 damages for personal injuries

On August 26, 1889, at about eight o'clock in the evening, Mrs M, a married woman, was a passenger as far as the depot in Philadelphia After safely alighting from the car, she fell on the wooden floor, some five feet away, the conductor assisted her to rise, but she claimed she was unable to walk A grocery-man near at hand had her taken home in his wagon

The woman was attended by a physician, who sent word to the company that she had broken several ribs, seriously injured her arms and legs, and as a result of the fall had aborted, and that the fetus was preserved in alcohol

The medical examiner sent by the company to make a report stated that he saw injuries upon the arms and legs, that she was plastered and bandaged in the usual manner for fractured ribs and also stated that as the doctor was a reputable physician, he accepted his statement that the ribs were broken

Subsequently the husband of the woman, and a friend, went to the office of the company and endeavored to secure a settlement for the injuries sustained by Mrs M, and for expenses incurred

The company declined to consider any proposition and suit was brought against them The severe injuries which it was claimed the woman had received attracted the attention of the legal counsel of the railroad, who, suspecting fraud, directed an investigation, which developed the following remarkable state of affairs

The woman, Mrs M, was intimate with the physician, that she had not sustained any injuries whatever, and was not pregnant at the time of her fall in the depot, that the alleged injuries on her arms and legs were specific ulcers, she had been under treatment for constitutional disease and for ulceration at one of the Philadelphia dispensaries some time prior to the accident That the fetus was obtained by the doctor from a girl of loose morals who lived in the house adjoining the plaintiff, that the doctor had produced an abortion on her when she was about four months pregnant, that another physician stated that he was called upon to stop the girl from bleeding to death after the criminal operation, that this girl was intended to be a witness in the suit for damages to prove the accident, and to state that she was a passenger on the car at the time That the husband and his friend tried to make arrangements to purchase other witnesses to testify to seeing the accident, that the two women Mrs M and the girl, picked up two men on the street, with whom they had oysters and liquor, and these men were asked to become witnesses, and were promised money for the same

It was also discovered that Mrs M was on the floor playing with puppy dogs immediately after the accident, showing that serious injury of the limbs and broken ribs were most improbable

Upon this report, the parties were all arrested and tried before Judge D Newlin Fell in the Court of Quarter Sessions, and after two full days' trial the defendants were all convicted, and were sentenced to fifteen months' imprisonment

Case 7 —Injury due to negligence of the claimant, followed by hysteria and simulated loss of power After accepting compensation, confessed to having wrongfully taken the money

Miss B stepped from the platform of a car while the latter was in motion, and in getting off faced the rear of the train, and had no recollection of stepping off, but found herself sitting on the ground bewildered The conductor came to her and said, 'Are you hurt? Can you walk? You should not have stepped off backward " Miss B , however, walked to the office of a medical man in the neighborhood, where she remained an hour and a half, was then taken to her home, and was confined to her room for some six weeks She became insomnious and lost considerable weight Some weeks after the accident she had a hemorrhage, apparently from the lungs eight weeks after the injury was walking about, went on a short journey, and after this went about as usual Damages to a large amount were claimed

On examination, Miss B , who was thirty eight (38) years of age not usually emotional, but nervous and spare frame, complained that she was unable even to do any light work, and that her health had been broken up Careful inquiry failed to detect any malady or any result of the accident, but she continually referred to compensation, and the effort was obviously made to make out the case as serious as possible

Miss B may have been somewhat contused and shocked, and subsequently became unnerved hysterical and prostrated That great exaggeration of her symptoms existed, was demonstrated when she was asked to lift one foot and then the other upon a chair, this she appeared unable to do, indeed affected not to have the power to accomplish the act Since it had been shown previously that there was no loss of muscular power, the effort to deceive was very apparent

There was no evidence of permanent injury , her nervousness was aggravated by too much sympathy by her friends of the church, who constantly condoled with her

Soon after this the case was settled for one thousand dollars ($1,000)

Some months later a lady called upon me, and seemed surprised that I could not recognize her, she then said ' Do you not remember Miss B ?" and then remarked, " I have felt as if I must see you and say that I ought never to have taken one penny from the railroad company , it was not right " And as suddenly she left

These cases are not detailed with any idea that the presentation of the facts will make any difference in future trials of railway cases, or that verdicts will in any wise be different yet it is well, perhaps, to place the histories of such cases before one another, so that we may be on guard in examinations, especially of persons who claim to have been damaged in railway accidents, whom we, from our observation, are led to believe are attempting deception

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AURAL VERTIGO (MENIERE'S DISEASE)

Read in the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY L HARRISON METTLER, A M , M D
CHICAGO ILL

The classical experiments of Flourens, in which destruction of the semicircular canals resulted in unstable equilibrium, were so brilliant and apparently so conclusive that it seemed very proper to attribute the vertigo in so called Meniere's disease to the hemorrhagic obstruction and consequent interference with the normal function of these same organs Medical literature abounds with cases wherein a sudden attack of vertigo associated with loss of hearing was diagnosed as hemorrhage into the labyrinth, without further investigation into the correctness of the inference I have never felt convinced that such an explanation was the true one for the majority of these cases In the first place, vertigo is a mental phenomenon of far too complicated a character to presuppose so simple an origin In the second place, it is not positively proved that the semicircular canals preside over the maintenance of general equilibrium, for experiments have been made which indicate that they subserve in some way the purpose of hearing rather than that suggested by Flourens In the third place, neither physiological experiment nor pathological observation are sufficiently abundant to show that the canals alone are responsible for the vertigo Other intracranial structures have, in the majority of cases, been injured along with the canals And finally, the absence of any positive postmortem examination showing involvement of the canals only, forbids all dogmatic assertions in regard to them being the source of the vertigo in Meniere's disease

I will briefly consider each of these arguments and analyze a few reported cases, but before doing so I will refer to two cases that have fallen under my own observation, both of which presented the typical picture of Meniere's disease, but in which the cause of the vertigo could be easily explained otherwise than as a hemorrhage into the semicircular canals The details of my first case will be found in the *Journal of Nervous and Mental Diseases* for January, 1891, page 19

E M , a German woman, 45 years of age, having a good family history, had been subject to attacks of malaria, rheumatism, asthma and dyspepsia The pulse was rapid, irregular and tumultuous, while the sounds of the heart indicated marked insufficiency of the mitral valve, the result of an old endocarditis Being a hearty eater, the patient retired one evening in March, 1890, after indulging in a full meal, and was suddenly awakened about two hours later with a horrible nausea and distress in the stomach There was intolerable vertigo, violent vomiting and severe frontal headache The vomiting continued in the morning and the dizziness became so great that standing upon the feet was absolutely impossible The vertigo was both subjective and objective, for she beheld objects swimming about the room while at the same time she felt herself whirling about like a top It was in the morning that she first noticed the loss of hearing in the left ear The deafness was complete, but there was marked tinnitus, which the patient described as a " pounding on metal," alternating with a peculiar noise like " a group of birds in the grass " I could discover nothing abnormal with the ears externally After treatment some time with the iodid of potash, the patient improved, and consented to have her ears examined by Dr Chas S Turnbull The Doctor wrote me his opinion, which will be found with the more detailed report of the case in the journal cited The general condition of my patient, the suddenness of the attack, the unilateral character of the affection, the limited nature of the symptoms, the gradual and permanent amelioration of the vertigo, the total loss of hearing and the absence of more positive bulbar and aural signs inclined me to regard the lesion [illegible] that of an embolus in the auditory artery

My other case I saw about a year ago The woman was about forty years of age, with a good family history, and with the full phlegmatic type of constitution There was no apparent cause for the trouble, as there were no symptoms of any special disease as in the former case She was married, but childless She retired one night seemingly perfectly well, and awoke suddenly after a few hours with a roaring sound in the head, accompanied by intense nausea and dizziness In the morning she found herself totally deaf in both ears An examination of the ears revealed nothing abnormal externally Various lines of treatment proved inefficacious, and though the vertigo soon vanished and the patient regained the best of health, there was still no indication of the slightest return of the hearing In both of these cases Charcot's treatment with large doses of quinin proved entirely futile

The mental phenomenon known as vertigo, reveals upon close study, a far more complicated nature than a mere disarrangement of the function of any one organ, such as the semicircular canals The study of vertigo alone is one of the most intricate in medicine, and though we are quite familiar with its subjective and objective manifestations its immediate cause remains yet a profound mystery The maintenance of equilibrium can not be satisfactorily assigned to any single center, though its disturbance may easily depend upon a number of distant reflex disturbances There is a multiplicity of impressions constantly pouring in upon the brain through the various avenues of sensation which must necessarily keep the mind in a state of extreme tension, so that the slightest exaggeration one way or the other will result in mental confusion and more or less vertigo We learn instinctively how to control and marshal these ever passing sensations before the mind, but if for a time they become too frequent, rapid or sudden, the controlling force of the intellect is weakened and we are confused and overcome by them Everybody knows how quickly vertigo is established by rapidly revolving mirrors, peculiar whirring sounds, electrical sensations upon the skin and such distant irritative conditions as dyspepsia and constipation Physiological psychologists are agreed now that our knowledge of the relationship of things, as well as of space and its dimensions, is the result of experience gained from the use of our muscles The infant learns these dimensions by the frequent application of its hands to the objects which it sees, and the sight, which is the only other sense that reveals to us an extended object, and that never shows us more than two dimensions at one and the same time, does so entirely through the "muscular sense" exercised in the use of the muscles of the eyeball Now when we study the nature of equilibrium we discover that it is dependent upon a normal consciousness of the proper relationship of things outside of the centers of consciousness It is not purely psychic as some have imagined There is the sensation of a motor process in it Dr Hughlings Jackson has long insisted upon the importance of this fact, while Dr Reynolds wrote as long ago as 1854 that "the feeling of equilibrium results from the harmony of our different sensations among themselves and with the motor impulse which is their combined effect When any one group of the sensorial impressions is distorted or removed, the balance is disturbed and as these impressions are themselves the stimuli of muscular action, attempts are made for its restoration producing vertiginous or allied movements" The principal factors in the preservation of equilibrium are therefore consciousness and normal sense impressions A vertiginous impression reflected through consciousness may end in a complete or incomplete motor act In the latter case there is merely a residual disturbance of past impressions without a fulfillment of the present impulse in complete motion, while in the former the patient is uncontrollably moved in one direction or another

If the views of Spitzka and Starr in regard to the sensory paths in the medulla be correct, they bear strongly in favor of this sensory motor theory of vertigo Thus Spitzka concludes that impressions from the cochlea reach the cortical centers in the superior temporal gyrus by way of the posterior division of the eighth pair of nerves, the trapezium of the same size, part of the lemniscus, posterior pair of the corpora quadrigemina, external geniculate body and the corona According to some late observations of Starr which prove the correctness of the views of Flechsig and Von Monakow, the lemniscus tract is associated with the so called "muscular sense" and is chiefly distributed to the inferior quadrigeminal body Some physiologists think that it is even continued up as far as the corona It is believed that this tract is associated with the sense of sight, as well as with the coordination of movements Flourens found that injuries to the corpora quadrigemina of one side caused "forced movements," and that their complete removal resulted in incoordination of movement, yet we have no knowledge of any connection between these bodies and the cerebellum, though it is barely possible such a connection does exist At all events the point which I desire to insist upon is the close relationship of all these tracts for sight, hearing and the "muscular sense" in the corpora quadrigemina and their more distinct termination in the cerebral cortex than in the cerebellum If vertigo were a kind of encephalic ataxia, and due simply to disturbed coordination, it might readily be attributed to the cerebellum and then the *probable* connection of this part of the brain with the organs of sight hearing and muscular sensibility would easily explain the vertiginous sensations in disease of any of these peripheral end-organs While the function of the cerebellum may be that of coordination and the maintenance of "continuous tonic muscular contractions" and while as Spitzka tersely remarks, it may be the center where "impressions of touch and position are associated with those of time and space," I find no authority for assuming that it is in any way the center for the institution of movements or the maintenance of these movements in a regular, methodical manner, which, to my mind, is the underlying phenomenon, objectively or subjectively, of true vertigo Vertigo is something more than simple incoordination, though incoordination may enter as one of its principal elements In vertigo there is a disturbance, not merely of the reflex functions but of the higher powers as well The motor and sensory phenomena of vertigo, in typical cases at least, are not mere sequences of abnormal motor and sensory impulses, but they are the impulses themselves The distinction which I am endeavoring to make is the same as that between the ataxic movements of posterior spinal sclerosis and the spontaneous movements of chorea In the one case there is the retention of power, but the loss of coordination, in the other there is loss of power with or without coordination Simple incoordination manifests itself in irregular unmethodical movements and thus shows that it is due to an affection of some subordinate regulating center of the brain, true vertigo, like chorea, manifests itself in regular methodical objective movements and thus reveals disease of a higher independent center

It is a significant fact, when considered in this connection, that the vertigo which is so characteristic of cerebellar disease and which is identical with the vertigo of Meniere's disease, is caused only by lesions in the middle lobe or that part of the cerebellum which is most liable to involve the sensory-motor tract of the medulla, and furthermore, that lesions of the lateral lobes not pressing upon or involving the middle lobe do not give rise to any known symptoms And it is still more significant that vertigo is not pathognomonic of cerebellar disease, for it may be caused by lesions in other parts of the brain as well Even in its coordinating function, it is more than probable that the cerebellum, instead of sending out direct coordinating impulses to the muscles, merely coordinates the impulses sent down from the cerebral centers above Indeed, as Ranney has said, "it is a curious fact that most of the effects of cerebellar lesions are attributable, to a greater or less extent, to irritation of the crura"

According to Goltz, Serres, Cayrade and others, the function of equilibrium is profoundly affected by destruction of the corpora quadrigemina The experiments of Ferrier upon monkeys, fishes and rabbits, and of McKendrick upon pigeons, revealed the same effects The corpora striata have also been shown by physiological experiment to preside over the maintenance of equilibrium, especially after the removal of the hemispheres Every indication points to the fact, then, that we must look for the center of equilibration not in one particular part of the brain, but in the harmonious action of the various sensory and motor centers one upon another

Now for the application of all this One of the most common peripheral disturbances of this sensory-motor equilibrium is disease of the ear Hecker has said that "the ear is the most intellectual of all the organs," and in regard to its effect upon the mind, both in health and in disease, it is indeed second in importance only to the eye Without stopping to consider the many causes of vertigo in connection with the external and middle ear, I will at once consider the question of labyrinthine vertigo It is pretty generally considered now that only the semicircular canals are affected in *true* Meniere's disease At least that is what Meniere himself seems to have believed His second and fourth propositions are that certain functional troubles, having their seat in the *internal auditory apparatus*, may give rise to cerebral symptoms such as intense vertigo, uncertainty of gait, turning to the right or left and falling, all of which may be attended with nausea, vomiting and syncope, and that all this tends to confirm the belief that the lesion which is the cause of these functional troubles is in the semicircular canals In his original paper he described ten cases, in only one of which was there an autopsy This case, the tenth of the series, had no disease of the nervous centers, but the semicircular canals were filled with a "reddish, plastic material" It was on the strength of this single observation that he declared the canals to be the cause of the cerebral symptoms Aside from the unscientific character of such a hasty generalization, this one case, as Bremner points out, will hardly explain those in which the cerebral symptoms come and disappear rapidly And if the hemorrhage into the semicircular canals were the cause of the trouble here and in the majority of the apoplectiform cases, as Knapp argues, it remains to be shown why the hemorrhage should be bilateral, since the aural symptoms are so frequently bilateral

Ever since the first announcement of this affection there has been much confusion in regard to it Disease in any part of the internal ear and even of the middle ear, has been called Meniere's disease, though, as we have seen, Meniere himself was careful to restrict the lesion, in its apoplectiform form at least, to the semicircular canals Knapp, whose paper upon the subject is second only to that of Meniere himself includes all affections of the entire internal ear, irrespective of their causes, under the name of Meniere's disease I have examined his cases and fail to see why he should insist so positively upon the inner ear as the source of the vertigo and other cerebral symptoms In his third case, which he is careful to specify as a fair example of Meniere's disease, one of the most prominent symptoms was diminution of the sight—a condition which remained after many of the other symptoms had vanished After discussing in full, Voltolini's famous case in which an autopsy revealed an extensive leptomeningitis with pus at the base of the brain, in the pons, medulla and cerebellum, and some hemorrhage into the labyrinth of the ear, he makes the sweeping generalization that "the changes in the nervous apparatus of the labyrinth consequent on the hemorrhage must have been such as to destroy the hearing function forever" Thus he totally ignores the possibility, and in Voltolini's case the extreme probability, of the central injury being the cause of the deafness as well as of the vertigo and other symptoms In Politzer's case, with autopsy, there was a fissure of traumatic origin at the base of the occipital bone which probably was the cause of the meningitis of which the patient died Pain at the base of the brain was here a marked symptom Both Politzer and Lucae report cases in which the semicircular canals were absent or filled with blood, and yet the patients did not suffer from any disturbance of equilibrium In the *Lancet* of May 16, 1891, Ferrier reports the case of a man 36 years of age who was stricken with total deafness in both ears after experiencing a sound like an explosion in the head The ear appeared to be normal, and the diagnosis was hemorrhagic effusion into the labyrinth without cerebral involvement And yet there seems to have been no pronounced vertigo In most of the reported cases of Meniere's disease that I have seen, while there was a possibility of the ear trouble being the origin of the special symptom group, there was an equal possibility, and in very many of the cases a strong probability, that the more prominent symptoms were due to a central or medullary lesion, and that the aural symptoms were merely a coincident member of the group

Gowers, who is one of the strongest advocates of the labyrinthine origin of vertigo, adduces five arguments in favor of his position His first is based upon the number of cases reported by Meniere and others I have already shown how inadequate are the proofs from this source His second is, that irritation rather than mere loss of function in the nerve is proved by the disease being attended with severe vertigo, which may cease when the progress of the disease has produced complete deafness There is usually so little correspondence between the severity of the vertigo and the amount of the deafness, as Gowers himself remarks elsewhere, that this argument fails

His third is, that in the majority of the cases of definite vertigo, the slight or considerable tinnitus that is present is evidence of a process of irritation of the fibers of the nerve That is true, but the argument is no proof of the source of the irritation being within the semicircular canals or labyrinth Tinnitus is not an unusual symptom of certain extra-labyrinthine lesions His fourth argument is, that slight loss of hearing, tinnitus and vertigo may be observed not only to come on together but to pass away together I fail to see that this proves anything more about the labyrinthine origin of the vertigo than does the previous argument Lastly, he asserts that "the frequency with which symptoms of labyrinthine disease are found in cases of vertigo is itself a fact of very great significance Of 106 consecutive cases in which definite vertigo made the patient seek advice, in no less than ninety-four, ear symptoms were present, tinnitus or deafness, or more often both "

The figures are undoubtedly significant in proving the frequent association of vertigo with auditory symptoms, but they are scarcely commendable as an argument of the labyrinthine origin of the vertiginous sensation It seems to me, therefore, that these propositions, which I have presented almost in the author's own words, do not make out a very strong case in favor of the labyrinthine origin of the vertigo, certainly not sufficiently so to warrant the large percentage of cases of vertigo which this writer attributes to diseases of the internal ear

It seems to me, furthermore, that he is almost self-contradictory upon this subject He lays stress in aural vertigo upon the coincidence of the auditory symptoms with the vertigo, and shows that this is due to the continuity of structure in the cochlea and semicircular canals He says, "it is conceivable that labyrinthine vertigo may occur without any auditory symptoms I have actually seen two or three cases in which definite giddiness existed alone and in which auditory symptoms came on later " Then when I turn to his account of gastric vertigo, I find this "I do not think it is quite certain that there is such a thing as definite vertigo of purely gastric origin We know that in 95 per cent of the cases of definite giddiness a morbid state of the labyrinth is the real cause of the vertigo " This leads us to infer, then, that in 95 per cent of the cases of vertigo there are distinct auditory symptoms Few general practitioners will be prepared to admit so sweeping an assertion Would the author have us believe that in the vertigo of seasickness, which is now pretty generally attributed to the disturbance of the visual reflex, there is also a morbid state of the labyrinth? If so, his dictum in regard to the ever present auditory symptoms does not hold good here

After admitting the implication of the semicircular canals in aural vertigo, it still remains a difficult matter to explain the vertiginous symptoms and loss of hearing upon this hypothesis in all cases The first case which I have reported might easily have been regarded as one of Meniere's disease, and yet there is no reason to suppose that the vertigo and deafness were due to disease of the semicircular canals I believe that the function of these canals in the maintenance of equilibrium has been much over estimated, certainly too positively inferred in view of the slight physiological and pathological data which we have as yet for such an inference Simple puncture of the auditory nerve in rabbits gives rise to rotary movements on the part of the animal, and it is a well-known fact that injection of water into the external ear, as well as inflammation of the middle ear, causes vertiginous sensations In these cases there is present the sensory-motor disturbance, but can we suppose that in all of them the semicircular canals are so grossly affected as to be the only immediate cause of the vertigo?

Both Steiner and Sewall carefully removed the semicircular canals from the shark, whose auditory apparatus is practically identical with man's, without obtaining any disturbance of movement The former experimenter believes that the loss of equilibrium results from lesions of the brain or its membrane, causing alterations of pressure, for he has again and again destroyed the canals in sharks, frogs and lizards without injuring the brain, and discovered no disturbance in the power of equilibration After careful investigation Bottcher and Baginsky have come to the conclusion that the cause of the rotation of the head in Flourens' and Goltz's experiments was the injury done to the brain, and not merely to the semicircular canals Bottcher marks the fact that the auditory nerve is not bound down at any point between the brain and the labyrinth, and that if one is careful not to pull upon this nerve the vertiginous sensations are not awakened by the injury of the semicircular canals The slightest traction upon the auditory nerve injures its attachment at the medulla, and so gives rise to the symptoms described by Flourens, Cyon, and Goltz In the experiments of Bottcher the head, furthermore, did not always rotate in accordance with the particular canal injured, as Goltz had formulated The identity of these canals with the cochlea in the embryo, their continuity with the epicerebral space through the aquæductus vestibuli, and their ever-shifting relations amongst themselves in the quadrumana, which go about sometimes in the horizontal and sometimes in the erect position, argue strongly against the special function of these canals being the maintenance of equilibrium In the discussion of my paper upon the same subject before the Philadelphia Neurological Society, Nov 24, 1890, Dr Dercum reported some observations he had made of the comparative anatomy of the labyrinth for the purpose of securing new light, if possible, upon the function of the semicircular canals He said "They bear a distinct relation to the lateral line organs of fishes, the nerve hills of the latter being identical in structure with the maculæ acusticæ Just as the inclosure of these nerve hills in tubes seems to have for its object the gaining of distinctness and definiteness of impression, so the inclosure of the maculæ within the semicircular canals seems to have the same object It is significant that each macula is situated at the *end* of a canal and this suggests that the canal is a kind of conduit to carry off vibrations after they have made their impression on the macula, and further, that if interference of vibration occurs, it occurs at a point *distant from the macula*. Confusion of sound is thus avoided. The inference from physiological experiment that these structures have for their special object the maintenance of equilibrium, has always seemed to me open to most serious objection." It is a well known fact that many fishes have a utricle and three semicircular canals, while some have only one and two canals. Amongst the lowest vertebrates the lamprey has a saccule with auditory hairs and otoliths in communication with two semicircular canals, while the myxine or hag has only one canal. Doubtless there are important sensory impulses of a special character which pass through these organs, but equilibration, due as we have seen to the fusion of a vast complex mass of sensations pouring in upon the brain from all sides, can not possibly be the result of merely a single set of impulses from such an end organ as the semicircular canals. The very nature of vertigo involves the idea of more or less loss of consciousness, and this alone would seem to indicate a higher cause for the trouble than simply these canals.

If it be granted that the pathological cause of this vertigo is to be found in the semicircular canals, it is hard to understand how in all cases the cochlea or the cochlea branch of the auditory nerve should necessarily be affected. In Flourens' experiment, the entire removal of the canals did not impair the hearing. So striking was this fact, that Flourens as well as others was led to believe that the branch of the auditory nerve which supplies the semicircular canals subserves motor purposes only. On the other hand, if Gelle's experiments are to be trusted, the cochlea is in no way the source of vertiginous impressions. Simple continuity of structure will not account for the loss of hearing when the lesion is a hemorrhage into the canals, and pressure alone will not answer as a cause in all cases of so called Meniere's disease. In the first place, there is no regular correspondence between the amount of deafness and the intensity of the vertigo; secondly, with total loss of hearing in Meniere's disease all known methods of diagnosis prove that the nerve itself, and not merely the internal ear, is affected; thirdly, physiological experiment shows that simple pressure does not cause total loss of hearing when no injury is done to the cochlea or cochlea branch of the auditory nerve; and finally no case has ever been reported in which the cochlea was primarily affected with consequent involvement of the canals and vertigo, though in blood supply and anatomical structure the cochlea and canals are similar. Hence, in Meniere's disease, I conclude that the lesion must concern the whole labyrinth or lie entirely outside of it.

It was Dr. Wilks of England, I think, who held that Meniere's disease was a neurosis of the centers of audition and equilibrium, and in its paroxysmal form at least was much like migraine with its eye complications. While this explanation can not be adopted for all cases, there is little doubt about the central nature of the disease in many of its aspects. Burnett declared that "the neuropathic diathesis is well marked in most cases of aural vertigo." The grouping of the symptoms, as well as the proximity of the tracts and centers involved, point to the encephalic origin of the affection. Especially is this indicated, however, by the sensory motor nature of the vertigo, whatever be the peripheral source of the disturbance, and its association with the state of consciousness.

Running between the superficial and deep roots of the auditory nerve are the external and internal divisions of the inferior peduncle of the cerebellum. According to Spitzka and Edinger, the posterior nerve root transmits sound impulses, while the anterior root is the path for the impressions which assist in the determination of the equilibrium. Some of the motor fibers of the auditory nerve pass to the ampullæ of the semicircular canals, while others are doubtless associated with the anterior root in particular and the peduncle of the cerebellum. Thus the close connection between the nerve of hearing and the sensory-motor tracts in the medulla, as well as the proximity of the auditory and pneumogastric nuclei, account for the frequent association of the symptoms, deafness, vertigo and vomiting. Any disturbance, then, in the course of the auditory tract, such as in the case I have reported, is liable to give rise to Meniere's symptoms. The lesion may assume many forms, but the important point is, that it need not be necessarily limited to the labyrinth. In many of the cases reported the probability is that it was altogether extra-labyrinthine.

In conclusion, I would assert that in Meniere's disease the source of irritation may sometimes be in the semicircular canals, just as sometimes it may be in the eye and in the stomach, but that the immediate cause of the vertigo can not be there for several reasons:

1. If the above explanation of the nature of vertigo be correct it is a condition dependent upon the inharmonious interaction of the sensory motor centers of the cortex.

2. If equilibrium depended solely upon the semicircular canals, there could be no rational explanation for the ocular and stomachal vertigos.

3. If the proximity of the various nuclei within the medulla be a sufficient explanation of the association of the symptoms, vomiting, unconsciousness, vertigo and loss of hearing when the semicircular canals are affected, why, we may justly ask, do we not in stomachal, lithemic and other vertigos of reflex origin have more frequent and more marked auditory symptoms?

4. Experimental injury to the semicircular canals is not followed by true vertigo, loss of hearing and the other constant symptoms of Meniere's disease.

5. Pathological data do not entirely and satisfactorily support Meniere's hypothesis. His only case with autopsy can easily be explained upon other grounds, and nearly all of the other cases reported by Politzer, Voltolini, Knapp and others had severe cerebral lesions, sufficient to account for the symptoms presented or were unproved by postmortem examination.

Finally. It is to be noted that of Bezold's carefully collected forty six cases of necrosis of the labyrinth, only twelve manifested symptoms of vertigo.

Burnett says, "aural vertigo may be termed a reflex cerebellar phenomenon from irritation in the auditory apparatus." That may be true as far as it goes, but, from what I have endeavored to show, aural vertigo may not be aural at all, except only so far as having certain aural symptoms associated with the vertigo, and we are not justified in view of the few physiological and pathological data still at hand, in assigning all cases of vertigo with loss of hearing to an unknown and undemonstrable lesion of the internal ear

Dr Hughes—I believe that we are approaching a better explanation of the vertigo connected with Meniere's disease as well as vertigo connected with cerebellar diseases If we adopt the current explanation of labyrinthian vertigo what are we to do with the vertigo from a stomachal lesion? What are we to do with vertigo caused by irritation in other peripheral areas and what are we to do in regard to the cerebellar vertigo? Now if you look into the results of therapy in these cases, the history of cerebellar abscess as well as of Meniere's disease in connection with the treatment as it usually suggests itself, you will find that the symptoms of vertigo are very greatly ameliorated and often caused to disappear entirely under judicious treatment to diminish the irritation, of which the author speaks in his paper, which gives us unequal arterial blood supply in all probability That thing was very forcibly impressed upon me a number of years ago in a case which was reported in a journal of nervous and mental diseases, of cerebral vertigo in which the individual described had the gait characteristic of cerebellar disease had the vertigo characteristic of that disease and was disposed to walk in a circle after the manner of birds experimented on by Flourens, when he first promulgated the doctrine and gave us the cue to the characteristic symptomatology, or what we supposed to be the characteristic diagnostic symptomatology of cerebellar disease The first case in which I observed this and the beneficial results of treatment, keeping the portal circulation constantly depleted, the bowels active without fail each day, and putting the patient under bromids, and strychnia, resulted very satisfactorily, the patient was enabled to go about the streets of St Louis unaccompanied and presented the appearance of a person who was recovered, so much so that his wife believed him recovered, and yet the man actually died suddenly of a rupture into the fourth ventricle, the cerebellar abscess having found its way thither The case is on record and well known The first case that called my attention to the fact that it was possible to ameliorate and obliterate the distinctive vertigo of cerebellar disease was this, and yet the cerebellar disease persists and the same has been found true in my experience in regard to labyrinthian vertigo, and I believe that clinical observation confirms the suggestions made by the author in his paper

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ADDITIONAL EXPERIENCES IN THE HYPODERMIC USE OF ARSENIC

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

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In a former communication [1] we called attention to the value of the hypodermic method of giving arsenic and reported some eight cases all told in which it was employed Since that time a large additional experience with the method has but confirmed our previous good opinion The list now includes twenty-eight cases of chorea, three of paralysis agitans and eight cases of neurasthenia

The hypodermic use of Fowler's solution has been recommended by numerous writers Hammond[2] claimed that the dose which could be administered in this way was much greater than could be safely administered by the mouth He says

> "I have frequently given as high as 35 drops of Fowler's solution as an initial dose It is very certain that the stomach would not tolerate this quantity Again, I have often carried the amount given by the mouth to the utmost bounds of prudence—till the eyes were puffed and vomiting almost incessant—and then have continued the arsenic in larger doses, by hypodermic injections, with the result of the cessation of all gastric symptoms and the cure of the disorder"

Dr Fruhwald[3] treated twenty two cases of chorea minor by this method He says that redness of the skin at the site of the punctures was common, and two or three abscesses formed The dose was from 5 to 20 drops, and after the use of thymol and deeper injections no further trouble was observed

Grunnach[4] treated one hundred cases of goitre with hypodermic injections of Fowler's solution, 1 part to 4 of water

Dumont[5] treated twenty six cases of goitre with injections of 10 minims of Fowler's solution

It has been noted by former experimenters who have employed arsenic hypodermically that there was a decided tendency toward the development of abscess as well as painful cutaneous inflammation These writers have invariably employed Fowler's solution and its irritating effects were attributed by some to a septic condition of the solution and by others to the spirits of lavender used to color it Prof W S Haines suggested that the irritating properties of Fowler's solution when injected into the cellular tissue was probably due to the free arsenious acid usually contained in the preparation as found in the shops, and that these might be obviated by using the arseniate of sodium, a stable salt, readily soluble and of definite composition Dr Haines recommends that the pure anhydrous salt be used, as ordinarily found in the shops it may contain from four to twelve molecules of water of crystallization If this be driven off by heating to 300 degrees the resulting salt has a definite composition with the formula $\mathrm{Na\ H\ As\ O_4}$, a 1 to 100 solution of this salt contains 53 per cent of the arsenic found in Fowler's solution, so, approximately, the dose of such solution should be about twice that of the liquor potassii arsenitis

Arsenic is one of the peculiar and exceptional remedies that is much less poisonous when exhibited beneath the skin than when given by the mouth The reason for this is shown by the fact that arsenic like several metallic poisons focuses itself largely about the upper end of the small intestine, stomach and liver, and toxic symptoms even if the arsenic is given in large doses under the skin will not appear largely in those organs Thrown into the cellular tissue it is at once absorbed into the general circulation and is distributed to all parts of the system, while if given by the mouth it may make the rounds of the portal circulation several times before entering the general circulation It is this peculiar fact that makes arsenic and mercury so much less irritating when given beneath the skin

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[1] Therapeutic Gazette January, 1891

[2] Nervous Diseases

[3] Jahrbücher für Kinderheilkunde 1887

[4] Schmidt's Jahrbucher ccx p 195

[5] Corr Blt für Sch Aerzte

The use of hypodermic injections of the arseniate of sodium is entirely free from the objections noted in the use of Fowler's solution I have given more than five hundred injections of strengths varying from 1 to 10 per cent, and have never noted any irritation, tumefaction or anything approaching an abscess Indeed, the solution is as free from irritation as is the use of simple water and any redness or slight ecchymosis following the injection is invariably due to carelessness in manipulating the syringe

The average dose of Fowler's solution given by the mouth varies from five to fifteen minims, perhaps the most usual dose is seven and a half to nine minims, and I think very few of us write prescriptions for quantities of arsenic exceeding nine minims in a single dose Of course, we may give it by the cumulative method, increasing each dose and then decreasing it, reaching nine to twelve minims, but certainly those are rather extreme doses

The quantity of arsenic in one grain of arseniate of sodium is 53-100 of the quantity found in one grain of arsenite of potassium, that is, a 1 per cent solution of the arseniate of sodium should have approximately about twice the dose of a 1 per cent solution of arsenite of potash or Fowler's solution As a matter of fact, I have exhibited an arsenic equivalent in the arseniate of sodium of 40 50, and 60 minims of Fowler's solution at a single dose, and it is my common practice to give an equivalent dose of 30 minims of Fowler's solution as my initial injection The highest that I have ever reached is the equal of three quarters of a grain of the arsenite of potash, that is, equivalent to 75 minims of Fowler's solution at a single dose and this without producing more than the slightest toxic effect

I think that the method is worthy of more extended trial, and it certainly in my hands has given exceptional results in the treatment of chorea I have not found it to be of any value in paralysis agitans or cases of neurasthenia in which I employed it, but in chorea it has certainly exceeded any drug I have employed heretofore, and has far exceeded in efficiency and in cutting short the duration of the disease, the employment of the Fowler's solution by the mouth, this I attribute of course to the larger dose given and the fact that the salt is brought immediately in contact by the blood with the nervous system without having first passed the liver

We certainly hope that while this method is so free from inconvenience and the drug is of such power that we shall hear of its use in malarial affections and in diseases of the skin In these latter disorders we should certainly expect to hear of better results than have been reached in neurological practice

DR J F HIBBERD—I suppose the doctor has met with some failures in his treatment What proportion do the failures bear to the successes, if there be observations which would enable him to make that statement? I perhaps am now particularly interested in the matter because I have a family of choreic people, the father and mother have had it the two daughters have had it turn about for two or three years, and I have tried about everything that I have known of others using with any success, but I think with all of them that the affection wears out, that is a good thing, sometimes, however, it does not wear out, but keeps on, but if your preparation of arsenic and soda will shorten the period of duration, even if it does nothing that we can measure accurately, it will be of great benefit to the general practitioner

DR DANIEL R BROWER—I know nothing specially about the use of the arseniate of sodium hypodermatically as Dr Moyer suggests, but I have no question as to its value from his statements, but I desire to testify to the fact that the arseniate of sodium is a very much better remedy to use in the treatment of chorea given by the stomach I have been for years using the liquor sodii arsenatis, because the soda salt of arsenic is very much better tolerated by the stomach, and I have succeeded in giving by the stomach without discomfort to the patient, without toxic symptoms, sometimes doses double the size that could have been given of the arsenite of potassium I am speaking, of course, of its administration by the mouth, and given in this way I have found it a very valuable aid to the general treatment of chorea Speaking about the treatment of chorea, I have had some recent experiences with the line of treatment suggested, I think, by Dr Wood of Philadelphia, the use of quinia in large doses, and two or three recent cases that have come under my observation have done surprisingly well with moderate doses of the arseniate of sodium and very large doses of the bromid of quinia I believe there is some advantage in the use of the salts of cinchona, especially the bromid of quinia, in the treatment of chorea I think the combination of the bromid with the arseniate either hypodermatically or by the mouth, is certainly quite an advance in the therapeutic treatment of chorea

DR C H HUGHES—I do not believe that arsenic is the best cure for chorea I know it is the fashion to laud arsenic as the remedy for chorea, but I have not found it as efficient in my treatment of cases as I have the moderate doses of Fowler's solution in connection with the bromid of quinia and the hypophosphites—that is the combination I always use, and I think six weeks is the limit to 90 per cent of my cases during the last twenty years I do not believe I recall a case in my practice now, a recent case, at least, that did not recover, with rest and this line of treatment, by the expiration of six or eight weeks Some cases recovered in four I have never adopted what I consider the fad of relying exclusively upon arsenic, and in regard to the use of quinin, it never occurred to me to omit the use of quinin in certain obstinate cases of that disease in the Mississippi valley I suppose it was because malaria entered into the disease as a complication, and it became necessary to eliminate that factor, as it is in so many diseases that we encounter in our practice in the vicinity of St Louis I have given very large doses of quinin in the course of treatment of chorea where I had reason to suspect there was a malarial complication or latent malaria as one of the depressing toxic influences operating upon the central nervous system, and I suppose that when the facts are fully learned, it will be found that those cases that yield so readily to quinin are those in which the chorea is really of malarial or toxic origin

Now regarding the chloral treatment, you know that that plan has been pursued exclusively, so has the arsenic treatment and so has the iron treatment Dr Hughes of England, used port wine and rhubarb, taking the children out of school and giving the necessary rest, and he cured his cases My experience is that the majority of cases will get well, if you remove the pressure that has been on the child, remove the source of depression, of irritation, take the child from school, return the child to childish ways and natural habits of life that belong to children, and improve its nutrition, and you have very little need of the arsenic goes, but, from what I have endeavored to show, aural vertigo may not be aural at all, except only so far as having certain aural symptoms associated with the vertigo, and we are not justified in view of the few physiological and pathological data still at hand, in assigning all cases of vertigo with loss of hearing to an unknown and undemonstrable lesion of the internal ear

DR HUGHES—I believe that we are approaching a better explanation of the vertigo connected with Meniere's disease as well as vertigo connected with cerebellar diseases If we adopt the current explanation of labyrinthian vertigo what are we to do with the vertigo from a stomachal lesion? What are we to do with vertigo caused by irritation in other peripheral areas and what are we to do in regard to the cerebellar vertigo? Now if you look into the results of therapy in these cases, the history of cerebellar abscess as well as of Meniere's disease in connection with the treatment as it usually suggests itself, you will find that the symptoms of vertigo are very greatly ameliorated and often caused to disappear entirely under judicious treatment to diminish the irritation, of which the author speaks in his paper, which gives us unequal arterial blood supply in all probability That thing was very forcibly impressed upon me a number of years ago in a case which was reported in a journal of nervous and mental diseases, of cerebral vertigo in which the individual described had the gait characteristic of cerebellar disease, had the vertigo characteristic of that disease and was disposed to walk in a circle after the manner of birds experimented on by Flourens, when he first promulgated the doctrine and gave us the cue to the characteristic symptomatology, or what we supposed to be the characteristic diagnostic symptomatology of cerebellar disease The first case in which I observed this and the beneficial results of treatment, keeping the portal circulation constantly depleted, the bowels active without fail each day, and putting the patient under bromids, and strychnia, resulted very satisfactorily, the patient was enabled to go about the streets of St Louis unaccompanied and presented the appearance of a person who was recovered, so much so that his wife believed him recovered, and yet the man actually died suddenly of a rupture into the fourth ventricle, the cerebellar abscess having found its way thither The case is on record and well known The first case that called my attention to the fact that it was possible to ameliorate and obliterate the distinctive vertigo of cerebellar disease was this, and yet the cerebellar disease persists and the same has been found true in my experience in regard to labyrinthian vertigo, and I believe that clinical observation confirms the suggestions made by the author in his paper

ADDITIONAL EXPERIENCES IN THE HYPODERMIC USE OF ARSENIC

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

BY HAROLD N MOYER, M D

Adjunct Professor of Medicine, Rush Medical College Fellow of the Chicago Academy of Medicine

In a former communication [1] we called attention to the value of the hypodermic method of giving arsenic and reported some eight cases all told in which it was employed Since that time a large additional experience with the method has but confirmed our previous good opinion The list now includes twenty-eight cases of chorea, three of paralysis agitans and eight cases of neurasthenia

The hypodermic use of Fowler's solution has been recommended by numerous writers Hammond[2] claimed that the dose which could be administered in this way was much greater than could be safely administered by the mouth He says

> "I have frequently given as high as 35 drops of Fowler's solution as an initial dose It is very certain that the stomach would not tolerate this quantity Again, I have often carried the amount given by the mouth to the utmost bounds of prudence—till the eyes were puffed and vomiting almost incessant—and then have continued the arsenic in larger doses by hypodermic injections, with the result of the cessation of all gastric symptoms and the cure of the disorder"

Dr Fruhwald[3] treated twenty two cases of chorea minor by this method He says that redness of the skin at the site of the punctures was common, and two or three abscesses formed The dose was from 5 to 20 drops, and after the use of thymol and deeper injections no further trouble was observed

Grunnach[4] treated one hundred cases of goitre with hypodermic injections of Fowler's solution, 1 part to 4 of water

Dumont[5] treated twenty six cases of goitre with injections of 10 minims of Fowler's solution

It has been noted by former experimenters who have employed arsenic hypodermically that there was a decided tendency toward the development of abscess as well as painful cutaneous inflammation These writers have invariably employed Fowler's solution and its irritating effects were attributed by some to a septic condition of the solution and by others to the spirits of lavender used to color it Prof W S Haines suggested that the irritating properties of Fowler's solution when injected into the cellular tissue was probably due to the free arsenious acid usually contained in the preparation as found in the shops, and that these might be obviated by using the arseniate of sodium, a stable salt, readily soluble and of definite composition Dr Haines recommends that the pure anhydrous salt be used, as ordinarily found in the shops it may contain from four to twelve molecules of water of crystallization If this be driven off by heating to 300 degrees the resulting salt has a definite composition with the formula $Na\ H\ As\ O_4$, a 1 to 100 solution of this salt contains 53 per cent of the arsenic found in Fowler's solution, so, approximately, the dose of such solution should be about twice that of the liquor potassii arsenitis

Arsenic is one of the peculiar and exceptional remedies that is much less poisonous when exhibited beneath the skin than when given by the mouth The reason for this is shown by the fact that arsenic like several metallic poisons focuses itself largely about the upper end of the small intestine, stomach and liver, and toxic symptoms even if the arsenic is given in large doses under the skin will not appear largely in those organs Thrown into the cellular tissue it is at once absorbed into the general circulation and is distributed to all parts of the system, while if given by the mouth it may make the rounds of the portal circulation several times before entering the general circulation It is this peculiar fact that makes arsenic and mercury so much less irritating when given beneath the skin

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[1] Therapeutic Gazette January, 1891

[2] Nervous Diseases

[3] Jahrbucher fur Kinderheilkunde 1887

[4] Schmidt s Jahrbucher ccx p 195

[5] Corr Blt fur Sch Aerzte

The use of hypodermic injections of the arseniate of sodium is entirely free from the objections noted in the use of Fowler's solution I have given more than five hundred injections of strengths varying from 1 to 10 per cent , and have never noted any irritation, tumefaction or anything approaching an abscess Indeed, the solution is as free from irritation as is the use of simple water and any redness or slight ecchymosis following the injection is invariably due to carelessness in manipulating the syringe

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The Chairman—I would call attention to the fact that the principal point of this discussion is the hypodermic use of the arseniate of sodium

Dr Frank R Fry, of St Louis—I think the doctor has fully demonstrated the advantage of his method I have used the arsenic hypodermically, though I have never used Fowler's solution in that way, but a solution of equivalent strength made aseptically, and I have had a great deal of irritation from it, though I have never had an abscess, but so much irritation that I have abandoned it long ago in the majority of cases, only occasionally employing it when the stomach was absolutely intolerant, and therefore I can corroborate the statement that the doctor has made that it is not the aseptic properties nor the irritating properties of the lavender water or spirits of lavender in the solution that make it irritating, but the salt itself Furthermore, in having these solutions prepared I was always careful to get a chemically pure salt

Dr Elmore S Pettyjohn—These cases are usually found in young persons, and there might be a great deal to overcome in giving these injections How does the doctor manage that matter to the satisfaction of his youngest patients?

Dr Moyer—I regret, since the discussion has taken the range that it has, that I have not here to present to you some of my clinical histories I did not at first desire to burden this Association with an account of a lot of choreic patients I conceive that we all see a vast number of them, but I will say to the gentleman who first made some inquiry that I have treated inveterate chorea and the recurrent chorea and chorea in its chronic forms, and I have treated acute chorea, in fact all varieties by this method Of course the value of any therapeutic measure depends upon the experience of the man that proposes the method, and I can not bring you anything to support it more than my individual assertion I have treated 500 cases with arsenic given by the mouth and 28 by this method, and I am absolutely surprised and amazed at the results that I have obtained I certainly think that the average duration of treatment has been very much less than six weeks I do not think that under this method it has averaged over two weeks I fully agree with Dr Hughes regarding many things in the treatment of chorea It is a self-limited disease, it is a disease whose natural tendency is to get well whether you employ treatment or whether you do not, the patient will get well in the great majority of instances, but I contend that in my experience, specific treatment is useful, and of all methods arsenic is by far the most useful and of all the arsenic methods the hypodermic use of the drug is the best You can get a much larger quantity into the patient's system without any toxic effect, and you produce a very profound impression indeed, and it has not been an infrequent occurrence with me to have the choreic movements lessen or cease entirely within three days I understand that there are a great many hygienic measures that can be employed in the treatment of chorea in the better class of patients, but the majority of my cases are out patients in a large dispensary, seven to fifteen years of age, the disease rarely affecting those below the seventh year, and I have been wholly unable to control their diet, and habits of living, many of them are children employed in factories and shops, belonging to the lowest classes in a large city, and it is among this class of patients in which you can do nothing for them except what you do medicinally that I would above all things recommend the trial of the hypodermatic use of this drug

Regarding Dr Pettyjohn's question, I would say that the patients perhaps object to it—the little ones do—those that are eight or ten do not seem to care very much The younger ones you simply take by the arm, the mother holds the other hand, and you give them the injection, that is all there is to it If they cry a little, why let them cry, but as a rule I have not found much difficulty in giving injections, even in quite young children The slight prick may be objected to at first, but after one or two injections they generally do not care very much about it

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THE FUNCTION OF THE RIGHT TEMPORO-SPHENOIDAL LOBE

Read before the Section of Neurology and Medical Jurisprudence at the Forty fourth Annual Meeting of the American Medical Association

WM J HERDMAN, Ph B, M D
ANN ARBOR MICH

In an authoritative work on "Diseases of the Nervous System" recently published, the temporal lobe of the brain on the right side in man is spoken of as one of the "latent regions of the brain, destruction of which, and irritation of which, produce no special or distinctive phenomena" Clinical and pathological evidence bearing upon the functions of the temporal lobes is acknowledged to be scanty at present by no less a specialist on this subject than David Ferrier, and the discrepancies in the results of the many experimental researches upon animals conducted by him, Victor Horsley, and other observers of undoubted merit, cause us to welcome any additional light, however meager, that will aid in clearing up the darkness that still surrounds this region of the human brain

A most novel and interesting case recently came under my observation in consultation, which terminated fatally within five weeks from the beginning, and in which I had the good fortune to obtain an autopsy, that may in some small degree add to existing knowledge as to the part taken in cerebral action by the right temporo sphenoidal lobe

Mrs G F, a native of Michigan, 45 years of age, spent the greater part of her life on a farm and was always a hard worker Her constitution and general health had always been good although she was not robust She has given birth to two children the younger now being 15 years of age A few years prior to her last illness she consulted an oculist for a slight impairment of vision in the left eye but it never gave her much trouble She never had rheumatism, gout, syphilis, cancer or any other serious disease or injury, but she has been a sufferer from headaches for many years Her father died suddenly, presumably of heart disease in some form Two of her uncles have died of brain trouble and a sister has epilepsy-gravior, two sisters are subject to severe headaches Her habits and modes of life were always exceptionally good and regular and her hygienic surroundings were always of the best She was of a lively and sociable disposition, active and efficient in her circle of acquaintance and much employed with church and Sunday school work About five years ago she changed farm life for village life and has for four years successfully managed the finances of a moderate estate which devolved upon her at the death of her husband

On April 3, 1893, while about her household duties she felt dizzy and sick at the stomach, and she stated to her son who came into the house soon after and found her lying on a couch, that she had fainted in the kitchen and after regaining consciousness which could have been absent but a few moments, she had without assistance walked into an adjoining room and laid down on the couch While talking with him she had what seems to have been a spasmodic seizure,and again became unconscious Her physician was summoned who on arriving within half an hour found her with all muscles relaxed except the inferior recti which seemed to be contracted The heart's action extremely feeble Ammonia carbonate was injected hypodermically and nitrate of amyl applied to the nostrils In about twenty minutes some signs of improvement were noticed in the circulation and at the end of three hours the pupils returned to normal condition She would then swallow liquids placed in her mouth if requested to do so by speaking loudly close to the ear (right)

There was no motor paralysis attending or following this condition for she freely moved both arms and legs, and there was no disturbance of the facial expression, but the intellect was profoundly clouded

April 4 —Spent a restless night, respiration moaning and sighing, with an occasional exclamation of "Oh dear," but no satisfactory response could be gotten to the inquiries as to the cause of her distress Temperature 101, pulse 100

April 5—Slight improvement in the intellect but still unable to recognize those about her Kept carrying her hands to her head and exclaiming "Oh my head," at frequent intervals The distress in the head seemed to be constant and mainly over the left frontal region She took nourishment when it was given to her but gave no sign of recognizing the need of it Very restless, tossing herself about in the bed Temperature and pulse the same as the day before

April 6 —Some improvement, answers when spoken to but often irrelevantly Complains of severe pain in frontal region Temperature 100, pulse 94

April 7 —Further return to consciousness, calls friends by name but with some hesitancy Seemed to have no memory of what had happened and expressed surprise when told she had been sick, said if it were not for her headache she would be quite herself again Headache constant and frontal, other symptoms remain unchanged

April 8 —No change, still restless and severe headache

April 9 —Headache less severe, mental conditions still further improved, more mental activity but attacked by hallucinations, able to recognize friends Temperature and pulse normal She was given a dose of castor oil which ordinarily was extremely disagreeable to her and swallowed it without remark In health the taking of castor oil was a thing she declared she could not do Afterwards when reference was made to it, she remarked that she must have been very sick if she took castor oil and did not complain of the taste

April 10 and 11 —Headache less acute and constant, mind clearer, she called to mind events that had occurred and began to take interest in the household duties, still troubled with hallucinations, but they were of a pleasant type and she laughed when relating them

At this time it was noticed that, although her mind had regained its activity, hearing on the left side was dull and confused, as she expressed it she "heard double"

April 12 —Began to sit up a little, headache not constant Hallucinations of being away from home, out in company and having a good time

April 13, 14, and 15 —Very little change except gradual improvement, less aberration of the mind Sat up a good portion of the day

April 16 —All pain in the head gone, mind clear and she felt quite like herself, got up and dressed and was about the house all of the day Much pleased at the visits of her friends Laughed and joked with them and they could not see but that she was quite well She took her meals at the table with the family With the exception that her hearing was imperfect especially upon the left side, and the taste remained blunted, there was at this time no evidence of sensory, of motor or mental disorder

This marked improvement continued until April 22 She planned to resume her household duties and discharged all attendants and appeared quite like her natural self No abnormality in mental action or in movements were observed by anybody about her

April 22 —The attending physician was again summoned, found her complaining of much frontal headache The temporal arteries were distended, but there was no abnormal action in the pupillary reflexes, nor was there any confusion of the mind He was again summoned on the night of the 23d and found her unconscious respiration slow, pulse feeble, pupils normally dilated No marked spasm of any muscles Cardiac and respiratory action soon improved and after a few hours she could be so far aroused as to be induced to take liquids and swallow them

April 24 —Still comatose but could be aroused somewhat by loud talking Temperature 101 Pulse 96, respiration 24

April 25 —Condition unchanged except the coma was not so pronounced She would often carry her hand to her head exclaiming "Oh my head"

April 26 —Condition much the same, except at intervals she recognized members of the family about her

April 27, 28 and 29 —Gradual improvement in the mental conditions, intellect sluggish and unable to fix her mind for any length of time upon any subject Eyesight normal with the right eye but with the left unable to count fingers at a distance of twelve inches Complained of much headache and some pain in the base of the brain, took abundant nourishment

In the afternoon of April 30, the nurse discovered that the left side was paralyzed throughout, the facial muscles and the tongue being involved, she was unable to turn the left eye outward Involuntary actions of the bowels and bladder

May 1 and 2 —Remained the same, speech and swallowing imperfect The patient was left handed

May 3 and 4 —Improvement in speech and swallowing, and began to get voluntary control of the left arm and leg

May 5 —Respiration normal, some voluntary control over the action of bowels and bladder regained Still some disturbance of speech and deglutition and the face remained slightly drawn to the right The tongue when protruded turned to the right, was red and clean Vision much improved in left eye and right eye normal Left eye can not be turned outward, mental action dull, but able to recognize friends Thoughts disconnected and disjointed She was able to sit up in bed for a few moments and to move from one side of the bed to the other

May 6 —Continued to improve Took nourishment readily Strength in right arm and hand increased She was able to grasp the hand of the nurse quite firmly Eyes normal in appearance but the left still impaired in action of external rectus Vision unchanged The temperature on this and other days after April 30 did not exceed 99½ Speech was now quite distinct Mind clear but inactive Headache which had been light returned with great violence towards evening

May 7 —Passed a restless night, manifesting more than her usual timidity Clung closely to the nurse Had several general convulsions in the morning from 8 30 to 9 30 during which the left eyelids were open and the pupil contracted The pupil of the right eye was widely dilated, the lids closed The headache seemed very severe as evidenced by her moaning and carrying her hands to her head after the convulsions ceased Stupor followed the convulsive seizures and gradually deepened into coma, though consciousness was retained long after she was able to utter a sound Hearing was not abolished up to within an hour or two of death for she would squeeze the nurse's hand in response to inquiries uttered in a loud tone, but she lay upon the bed in such a manner that she could not be approached only upon the right side, and hearing upon the left side was not tested during the last weeks of her illness

NECROPSY

Eighteen hours after death Skull unusually thick Dura mater congested and apparently thickened Superior longitudinal sinus empty, veinous congestion of the pia mater, the arteries moderately full No naked eye appearance of special abnormality about the frontal lobes, although the anterior cerebral arteries seemed somewhat more anemic than others A clot of dark semi-coagulated blood about two inches in diameter occupied the right middle cornu, and the walls of this cornu were extensively disintegrated and readily gave way The disintegrated tissue involved the anterior half of the hippocampus, the anterior extremity of the superior temporal and the anterior third of the middle and inferior temporal gyri The gyrus hippocampus was largely undermined although its surface remained intact The island of Reil was softened Blood coagula more or less firm and recent in formation, filled the lateral ventricles the third ventricle and the infundibulum, and extended through the aqueduct of Sylvius into the fourth ventricle No softening or disintegration had taken place except in the right temporo sphenoidal lobe The time being limited other cavities of the body were not explored

I need scarcely say to you who have been able to follow me in this hurried recount of bedside observations, that the revelations of the autopsy were something of a surprise to me In the light of the discoveries then made I was compelled to admit to myself that I had, in constructing a theory of causation of the clinical phenomena observed, placed too much stress upon certain prominent symptoms I saw the patient twice for about half an hour each time On the first occasion, the suddenness of the onset of the symptoms, the mental confusion, the severity of the headache, which was frontal and left-sided, the impairment of vision of the left eye, the entire lack of motor and sensory abnormalities (for this was at a time when she was beginning to recover from the first attack) impressed me quite forcibly, and I was confident there was an arterial embolus obstructing the left anterior cerebral artery The subsequent complete clearing up of the mental cloudiness and the subsidence of all other symptoms only confirmed me in this opinion The only thing that was suggested to my mind that threw doubt upon this conclusion was how to account for the dullness in hearing in the left ear But in the apparent harmony of the more prominent symptoms in accord with my theory, this did not seriously attract my attention The perverted or impaired taste was not an observation of my own, but was a fact learned from inquiry of the attendants subsequent to the autopsy The theory of embolism seeming to account for the symptoms following the first attack, the phenomena attending the second attack, which occurred after twenty days, and when many of the disturbances resulting from the first had subsided, presumably because of some degree of collateral circulation being established, were accounted for on the assumption that a thrombus had formed posterior to the embolus and its backward growth had, in all probability, crossed the anterior communicating artery and suddenly plugged the other anterior cerebral, as at this time, you will observe, there were no spasms, no paralysis, simply an obscuring of mental faculties which again largely cleared up within a few days

The autopsy revealed that the original attack had been due to a hemorrhage, not very extensive, interior to and at the lower extremity of the right lateral cornu Softening followed, involving the hippocampus major at its lower extremity, the anterior extremities of the superior middle and inferior temporal convolutions

The hemorrhage from its location might have caused pressure on the optic commissure, especially its left side, together with interruption in the circulation through the anterior part of the circle of will in rendering the anterior cerebral arteries anemic At the second attack the hemorrhage, still more extensive and far reaching, had extended into the lateral ventricles and the third, even passing into the infundibulum and distending it, causing pressure on the pituitary gland The third attack, from which she never rallied, was attended by an escape of blood from the same source, but in addition to flooding the lateral and third ventricles it had passed through the aqueduct of Sylvius into the fourth ventricle

I think we are justified in the assumption that as far as any symptoms observed in this case can be justly referred to the lesion in the right temporal lobe, they tend to show that its function is of the same nature for the left side of the body that Ferrier has found the left temporal lobe to be for the right, a cortex center for hearing and taste

My experience in this case has impressed upon me more strongly than ever the necessity of a systematic and thorough examination in detail of all the sensory and motor tracts in every case of central lesion, and that according to a definite plan should, wherever circumstances permit be rigidly carried out, even through certain symptoms may seem to show that such extended investigation is superfluous

DR KIERNAN—As Dr Herdman has indicated in the first part of his paper, it is well known that lesions of the right temporal lobe give fewer special symptoms than lesions in any other part of the brain It is in some respects the almost latent region of the entire brain Doubtless it has its functions The doctor has suggested in his paper that the functions of the right temporal lobe are the same for the left side of the body as the left for the right, but the functions of the left temporal lobe, at least the principal part of the left temporal lobe, are largely for hearing, which is not a function for either the one or the other side of the body, and in many cases the left half or left side of the brain in certain functions, acts for both sides of the body It is interesting, however, in this case, to note that the patient was left handed Now, ordinarily, I have no doubt, that while the right third frontal convolution and the right upper temporal convolution and the temporal convolutions generally are comparatively latent, yet they are centers for these functions potentially, before the left side of the brain is developed Here it would seem to me to be the reasonable explanation that probably both the right third frontal and the right upper temporal, in accordance with what we find in left-handed cases, had taken on the functions of the left side of the brain more largely than is usual I have had several cases of lesion of the right temporal lobe One of the most interesting cases that I have ever seen is recorded in my paper on cerebral localization, and it was also reported by Dr H C Wood, whose case it was in fact It was originally a case of tumor of the right temporal lobe This tumor grew and radiated in various directions Finally hemianopsia and other symptoms indicative of lesion of the occipital lobe were present, and then Dr Wood in consultation with ophthalmologists and Dr Agnew, decided on an operation, and the patient was trephined over the occipital lobe of the right side The patient latterly had lateral hemianopsia Dr Agnew came down on really a radiation of this tumor, but doubtless that which produced the hemianopsia The patient died, an autopsy was made I saw the specimen which was an immense tumor involving the entire right temporal lobe, or very nearly so, and thence had grown backward into the occipital lobe There was a record of observations of this patient for a long time which showed that this tumor had been in the lobe with some development for a long time, but the practical point about it was that the lobe usually, so far as we know, is latent in symptomatology and that both neurologists and surgeons should pay very strict attention to the possibility of symptoms indicative of occipital or other lesions being really the symptoms of the final development of a right temporal lesion I had one other case which I have also reported, a glioma of the right temporal lobe, the patient dying from intercurrent hemorrhage

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Blank applications for membership in the ASSOCIATION, at the JOURNAL office

LAWS OF GROWTH OF BACTERIA APPLIED TO ASEPTIC SURGERY

Read before the Section of Military Surgery, Pan American Medical Congress, September 7, 1893

BY ROBERT REYBURN, A M, M D

PROFESSOR OF PHYSIOLOGY AND CLINICAL SURGERY MEDICAL DEPARTMENT HOWARD UNIVERSITY WASHINGTON D C

It has been well said by a great operator that every surgical operation is a study in bacteriology There will be found, we believe, at the present day very few surgeons who will gainsay the above statement, and yet it may be worth our while to examine the question whether our surgery, as practically carried out, is in perfect accordance with the laws of bacterial growth which are the underlying basis upon which aseptic surgery has been built To return to elementary principles let us inquire what are the three essential conditions favoring the growth of bacteria and other microorganisms? The answer, of course, that would be given by every tyro in surgery would be the well worn statement heat, moisture and atmospheric air In other words, the very same conditions which favor the growth of bacteria are precisely the same conditions that are essential to the growth and repair of all the tissues and organs of the human body

The logical sequence of this results in the following statement, viz That no treatment of the tissues or organs of the body involved in surgical operations can be successful, which seeks by the action of powerful chemical agents to destroy bacteria in and around wounds, for if powerful enough to accomplish that object, the tissues themselves must be destroyed or injured

A surgical operation is to a certain extent the opprobrium of medicine, for in having recourse to it we thereby confess the failure of our science The ideal surgical operation, therefore, is one that removes the diseased or injured portion of the body with as little disturbance of the normal conditions of the tissues as possible Repair without inflammation is, as all know, the motto of modern surgery How preposterously absurd, therefore, is it for us after having removed, let us say, a tumor or limb from the body, to douche the seat of the operation with solutions of mercurial chlorid or other powerful irritant, producing necrosis of the tissues and thus preventing the very end we seek to attain

Notwithstanding the profound respect that all surgeons feel for the work and self-denying labors of Sir Joseph Lister, yet there can be no questioning the fact that the theory and practice of antiseptic surgery are rapidly being abandoned, and the more perfect science and art of aseptic surgery are being substituted in its stead

To Prof Lister we owe the grand idea of excluding the bacteria and other germs from wounds, thus creating the new science of antiseptic surgery It is perfectly true that aseptic surgery, as now practiced in this country and in Europe, is very different from, and far superior to, the cumbrous procedures and dressings devised and practiced by the father of antiseptic surgery The carbolic spray, once universally applied, has been almost entirely abandoned, and during my recent visit to Europe I never saw it once used The many layers of protective gauze, mackintosh, etc , are now replaced by a simple layer of iodoform gauze, with an abundant layer of aseptic cotton firmly retained by bandages

Another remarkable change is the growing disbelief in the efficacy of the ordinary antiseptic solutions when used as germicides A solution of carbolic acid has been shown to be a weak germicide, and the same may be said of a solution of boric acid and of the other solutions used commonly for this purpose Mercuric chlorid has until the present time been our sheet-anchor as a germicide As we lost our faith in one germicide after another, we thought we could rely on that Yet the iconoclasts are busy in their work of tearing down all idols in medicine, and now they have not left us this one Recent investigations carried on at Johns Hopkins University (published in the Johns Hopkins *Hospital Bulletin* of April, 1891, pp 50–60), by Dr A C Abbott, on "Corrosive Sublimate as a Disinfectant against Staphylococcus Pyogenes Aureus," on page 59, at the close of a very elaborate series of investigations on this subject, he says "It is seen that under the most favorable conditions, a given quantity of corrosive sublimate has the property of rendering inert only a given certain number of individual organisms " Ibid, page 60, he summarizes his results in the following words "In the light of these experiments and those of the experimenters quoted in this paper, it is plain that for use in surgical practice, the solutions of corrosive sublimate do not possess all of the advantages hitherto attributed to them To the employment of the sublimate solutions upon wounded surfaces it is plain there exist at least two serious objections First, the albumen of the tissues and fluids of the body tends to diminish the strength of, or indeed renders entirely inert, the solution employed, and second, the integrity of the tissues is materially injured by solutions of this salt '

Investigations made at the University of Michigan (published in the *Medical News* of October 1 and 8, 1892), have shown that solutions of mercuric chlorid when used as a germicide are often inert, and still oftener actually injurious to the tissues, when applied during surgical operations

Dr Charles T McClintock gives in the above paper (*Medical News*, October 8, 1892, p 399), the following summary of his experiments, viz

"1 The high rank heretofore given to corrosive sublimate as a germicide is without warrant and was based on faulty experiments

"2 The very varying power of resistance in different cultures, as pointed out by Esmarch and insisted on by Gruber, is an all important factor to be noted in determining the germicidal power of any agent

"3 That sublimate forms with cellulose, as cloth, filter paper, etc , with silk, with albuminous bodies, with some part of bacteria (probably the envelope), a chemical compound that can not be removed by any amount of washing with water

"Thus the sublimate, when acting upon a germ, forms a capsule around it that protects the germ for the time from the further action of the sublimate, and in turn forms an impenetrable barrier to the growth of the organism unless it be removed This barrier may be removed with salines, and is more rapidly removed in proportion to the renewal of the salines, conditions that are fulfilled in the circulating blood

"The above named experiments would seem to warrant the expression of the opinion, that the use of solutions of corrosive sublimate in surgical operations should be limited to the cleansing of the surface of the part to be operated on, and to the disinfection of the hands and arms of the surgeon, and furthermore, that such solutions should never be applied to surfaces denuded of epithelium, or cut surfaces of the body made during surgical operations ”

Antiseptic surgery endeavors to destroy the micro-organisms in and around the wound, and thus prevent their development How futile this effort must be, when we consider that these organisms are everywhere and at all times present with us They are in every breath we draw, in much of the water and in many of the articles of food that we consume, and indeed, exist always in the alimentary canal and all parts of the body exposed to the air But on the other hand, it must be remembered that there are bacteria and bacteria There are some species of bacteria which, when planted in a wound, will bring forth as the result of the poisonous materials formed by them, the formation of pus with the resulting septic fever, as certainly as the acorn when planted and nourished will develop into the sturdy oak There are other species which when they come in contact with a wound are practically harmless Of course we can not with the naked eye distinguish between the poisonous bacteria and the harmless ones, and hence our only safe plan is to as far as possible exclude them altogether from wounds, whether made by violence, or those made during surgical operations How, then, can this be done? The first point to be observed is, to use as little water or watery antiseptic solutions as possible in contact with the wounds made during surgical operations The reason for this course is that by so doing we remove one of the essential conditions necessary for the development of bacteria, and thus prevent or at least hinder their growth

It is practically impossible to diminish or prevent the growth of bacteria in a wound, by either raising or lowering the temperature of the wounded parts, hence we can only endeavor to accomplish this object by making use of the other two methods of limiting bacterial growth, viz to keep all wounded surfaces as dry as possible, and exclude them from the action of the atmospheric poisonous germs during the process of repair

Simple and self obvious as these principles of treatment may appear to be, yet they are largely neglected and ignored by very many surgical operators at this very time Often during an operation performed even by a most eminent surgeon (let us say an amputation), we see the field of operation deluged with a solution of boric acid, a solution of carbolic acid, or worse still a solution of mercuric chloride This seems to be radically wrong in practice and entirely inconsistent with the elementary principles of aseptic surgery Of course, in operations which require the opening or removal of large suppurating cysts or cavities, it is necessary to wash them out This should be done, we believe, with fluids as near the composition of blood serum as possible That wonderful operator, Lawson Tait of Birmingham, England, who has nearly completed his third thousand of operations upon the abdominal cavity, uses no fluid to wash out the abdominal cavity during his operations, excepting recently boiled water

For use in surgical operations the following fluids only are necessary, viz recently boiled water used tepid (about the temperature of 100 F) and normal salt solution (0 75 per 1000 easily made by dissolving one ounce, avordupois, of common salt in a gallon of boiling water)

Aseptic surgery therefore, after all is nothing but cleanliness, but when we say that, we mean cleanliness carried to a microscopic degree of perfection, and far surpassing the ordinary ablutions by soap and water What we endeavor to do at the present time, before any surgical operation is to so thoroughly cleanse the patient, the surgeons, assistants, nurses, surgical appliances and dressings (of course including the hospital and all its surroundings) so that no germs of poisonous bacteria can infect the wound, and cause suppurating fever, and perhaps the death of the patient operated upon Modern surgery starts out with the assumption that in an operation aseptically performed upon an aseptic patient, and by an aseptic operator, there should be neither suppuration nor fever following any surgical operation This of course is the ideal of surgery, which can not always be realized, but nevertheless it is the goal towards which we should aim, and which we should always endeavor to attain

Every instrument and surgical appliance must be sterilized shortly before the operation, either by boiling in water containing 1 per cent of carbonate of soda (commonly called washing soda) half an ounce to three pints of water, or by being exposed to a dry heat above the temperature of boiling water (from 230 to 240 degrees Fah) for one-half hour before the operation

This can be done in the various patterns of steam and dry sterilizers which are now on the market, and can be procured at a moderate cost But my principal object in writing this article is to call attention to the fact that aseptic surgery can be practically carried out without the purchase of any apparatus whatever A tin wash boiler, which can be found in the humblest home is just as good for sterilizing surgical instruments as Arnold's, or other of the steam sterilizers now in use A still more simple sterilizer for small instruments is the ordinary oblong tin baking pan, so familiar to our eyes in our youthful days This pan when filled with boiling solution of carbonate of soda, may not look quite so ornamental as a porcelain evaporating dish, or a forty dollar copper sterilizer, but it will do just as good work As before mentioned, to the above must be added absolute cleanliness of the operator, assistants, nurses, and in fact of all who come in contact with the patient It is scarcely necessary here to say that the part operated upon, and the arms of the operator, assistants and nurses must be thoroughly scrubbed first with soap and water, and then with solution of one to 2000 mercuric chlorid, just before the operation

One incidental and very great advantage in operating in private houses, providing they are clean and in good sanitary condition, is that the germs of poisonous bacteria are for obvious reasons not so liable to be found there as in the air of crowded hospitals In regard to the sterilization by the dry method, the only thing that is absolutely necessary to be purchased is a good thermometer, graduated to a temperature of 300 degrees Fah Of course it is convenient, and perhaps more surgical looking, to buy a dry sterilizing apparatus, but it is by no means essential The oven of a kitchen range or that of an ordinary cooking stove will answer every purpose Take a common pasteboard box, such as letter envelopes are packed in, place in the bottom of it a layer of aseptic cotton about two inches in thickness, lay on this your instruments and surgical appliances (bandages, etc.) with your thermometer, and your apparatus will then be complete. Place in the oven and expose to a temperature of 230 to 240 degrees Fah. This temperature can be easily regulated by a little practice, and is lower than the temperature required for ordinary baking purposes, which is said to be 270 degrees Fah. Finally, allow me to add the following maxims: 1. Never use a drainage tube in a wound unless you are absolutely certain you can get union by first intention. 2. If you have an amputation to perform, ligate every vessel requiring it with aseptic catgut, silkworm gut or silk; cut the ligatures off close to the vessels and leave them in the stump, close the flaps with similar sutures, and use no adhesive plasters in contact with the flaps of the stump. After you have stitched up the flaps, dust their surfaces with iodoform, boric acid, or subnitrate of bismuth. Place over this a layer of iodoform gauze, then an abundant layer of aseptic cotton, and over all this two layers at least of a well-fitting bandage. The reason why I do not use adhesive plaster in contact with the flaps of the stump, is that it can not be properly sterilized, and is very often the means of infecting the stump.

Above all things, never open a stump for ten or twelve or even fifteen days after an amputation, if the temperature of the patient is at normal point, or even a degree above. The last limb I amputated was dressed for the first time on the sixteenth day after the operation. On the other hand, if the temperature goes up to 102 or 103 degrees, open up the stump at once, and find out the cause of the trouble. In Bichât Hospital (located in Paris, France), I saw a number of stumps of amputation in the summer of 1892 which had only received two dressings, one on the fifteenth day, and the other final dressing on the twenty-eighth day after the operation.

ADDRESS

CHAIRMAN'S INTRODUCTORY ADDRESS.

Read before the Section on Ophthalmology, at the Forty-fourth Annual Meeting of the American Medical Association.

BY S. D. RISLEY, M.D.
PHILADELPHIA, PA.

I can not refrain from expressing my high appreciation of the honor you have conferred in calling me to preside over the deliberations of the section. Permit me to extend my most cordial greetings and to express the personal gratification I feel in again meeting my colleagues in ophthalmology from all sections of our country. It is fitting that I should congratulate the section that its members have again been spared through the toil and vicissitudes of a year and are still actively engaged and deeply interested in this beneficent work. The activity displayed everywhere as set forth in a rapidly growing special literature is encouraging, not to say inspiring. Not only are periodicals devoted to ophthalmology multiplying, but the character of the papers published are rapidly improving. Careful scientific work is obviously on the increase and the clinical papers also portray a class of work far superior to that of only ten years ago. To me this has been a source of great encouragement and to us all just cause for congratulation. There can be no question as to the large share the members of this section of the American Medical Association have had in this advance. It is my ambition to see it assume the rôle of authority in our special work in the United States, so that its utterances shall be regarded as the expression of the latest and best opinions. In uttering this sentiment I am sure that I but voice the feeling of every member of the section. If this ambition is to be realized, however, to any higher degree than in the past, it must be through the unselfish devotion of every member, not only in his everyday individual work in laboratory and library, clinic and consulting room, but devotion also to the interest of the section. While I have no doubt this feeling of devotion has been entertained by every member, our methods of section work have not afforded adequate means for its expression. The fault, if any, has been in a lack of careful organization. There has been no lack of material; indeed, we have been overwhelmed with the abundance presented for consideration and discussion, but we have been too prone to content ourselves with the simple recording of the facts of our experience. Paper after paper has been presented, manifesting the most painstaking and interesting observation of unusual experiences. Some discussion has followed or similar experiences have been doubtfully reported from memory, thus adding to the richness of material, but in the end much loss has been sustained, both from want of time for adequate discussion and from the want of classification of reported facts. I fear I shall take too much of your valuable time by attempting to present this in all its bearings, so content myself with the statement that our design should be, first of all the presentation of the carefully prepared papers, and for this the greatest latitude should be accorded. To adopt any method which would hamper this feature of our work would, I am sure, be a great mistake. But in order to secure the highest usefulness it would be of great service if each member should study the list of expected papers and prepare for the discussion by reviewing his own experience in the same direction. By this means we would secure a consensus of opinion and the section speak as a body in its transactions, instead of presenting simply collections of individual views as expressed in the published papers. In the second place, special provision should be made for the elaborate study of some special topic or some form of disease which has baffled our skill or about which there is diversity of views as to nature and treatment. For this purpose I would suggest that at each annual meeting a commission should be appointed for the investigation of some selected subject, to report at the following annual meeting. By way of illustration, who of us would not like to have the report of such a commission, e. g., hemorrhagic glaucoma or retro-bulbar neuritis, or the pathogenesis of the myopic eye, or the nuclear palsies of the ocular muscles, or the anomalies of ocular balance. Then a carefully organized discussion of the report of the commission would secure a valuable review of the subject and the consensus of opinion of the section, which would find place in special literature, be widely quoted and the reputation of the section and of American ophthalmology be greatly increased. Such studies would render the sessions of the section so valuable that none of us could afford to miss its annual meeting and thus the prosperity of the section would be generally enhanced In the publication of our special bound volume I would suggest that the discussion should also be included so that any unusual views presented by the author of a paper should stand in juxtaposition to the expressed views of his colleagues

PANNUS AND ITS TREATMENT BY THE DIGESTIVE FERMENTS

Read in the Section of Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY JAS A LYDSTON, M D, Ph G

Formerly Professor of Inorganic and Medical Chemistry and Lecturer on Diseases of the Eye and Ear, Chicago College of Physicians and Surgeons, Chicago, Ill

The etiology and course of pannus are so fully appreciated that it will not be necessary to consume valuable time by entering into a lengthy description of the disease, suffice it to say for the purposes of my paper that inasmuch as pannus is one of the most frequent sequelæ of trachoma I shall limit my remarks to the so-called granular pannus, that is, that form in which the formation of granular masses in the corneal layers has caused infiltration and vascularity of the corneal surface

In this type, the morbid changes first begin to assert themselves in the upper margin of the cornea at the limbus conjunctivæ and we note further that its tendency to clear is in direct proportion to the degree and duration of the inflammatory process, in other words, the further the process departs from the character of a simple infiltration throughout the more ominous will be the prognosis and, indeed, in the light of our present knowledge bearing on this subject we know that complete reparation after pannus which implicates the deeper corneal layers is a forlorn hope, but in all cases in which the cell migration which constitutes the infiltration in pannus is confined to the corneal region lying between the anterior elastic lamina or Bowman's membrane and the corneal epithelium there is an intrinsic tendency to clear In proportion, however, to the increased aggregation of cells, Bowman's membrane undergoes atrophic changes and finally is obliterated, thus permitting the process to extend more deeply From a histological standpoint, pannus proves to be a layer of newly formed, soft, cellular tissue greatly simulating in appearance the infiltrated trachomatous conjunctiva This tissue is more or less vascular and occurs in more or less typical layers imparting an uneven nodular aspect to the growth Special terms have been assigned to the disease which are to a certain extent descriptive of pannus in the several types, thus we have pannus tenuis, which indicates a recent pannus exhibiting no great thickening, again, pannus vasculosus, signifies the vascular type, and pannus crassus or carnosus implies a very dense pannus, still further, we have pannus sarcomatosus, which is an unfortunate term, inasmuch as it generates confusion with neoplasms, finally, we have pannus siccus which is mostly composed of connective tissues, there being few or no blood vessels

In the management of this class of cases the preeminent notion heretofore has been to cure the conjunctival affection from which the disease takes its departure, it being held that the pannus will spontaneously disappear, with this object in view various therapeutical measures have been resorted, to such as are usually exhibited in the treatment of trachoma, for example, nitrate of silver in solution or substance, sulphate of copper in solution or in the form of "blue stick" as it is called, and the various antiseptic measures have all found fitting application, and even the more radical measure of inoculation, either with the pus of an acute blennorrhea as advised by Piringer and Jaeger, or the milder method of jequirity treatment first advocated by De Wecker In conjunction with the foregoing ponderous array from the therapeutical armamentarium the surgical procedures of syndectomy, iridectomy and sclerotomy, and even an attempt at radical removal of the growth by scraping as advised by Gruening have all been utilized in these cases, and notwithstanding the great mass of literature that has accumulated in the course of time, we are still far from a unity of views with respect to the treatment of pannus Within the last year I resorted to a mode of treatment which was particularly pleasing to me in its results and I herewith present an outline of the course adopted, not with any idea that it will wholly supplant the foregoing measures, but if it proves as efficient in the hands of others as in my own, that it may become an advantageous auxiliary in the management of such cases I refer to the treatment of pannus, particularly that type characteristic of trachoma by the digestive ferments The first case in which I employed a digestive ferment was in that of a man aged 45 who had suffered with trachoma and its ravages for a period of eight years Papillary hypertrophy and trachomatous granules were still quite noticeable, together with very perceptible atrophy of the conjunctiva tarsi and a very pronounced pannused condition of both corneæ, which rendered it impossible for the patient to get about unattended Entropion had also supervened Viewing pannus as a new growth more or less vascular in type, I surmised that if I could but bring a medicament in contact with it that possessed powerful digestive properties I could favor its removal, and with this object in view I resorted to daily inspersions of powdered papoid with boric acid Papoid is the new proteolytic agent derived from the carica papaya or papaw plant, and bids fair to become a most valuable addition to our materia medica This agent exhibits the power of digesting all types of proteid and albuminous substances, both in a coagulated and uncoagulated form, and its digestive properties are still further enhanced by the fact that it acts in acid, alkalin and neutral media, though, as my experience demonstrates, more pronounced in alkalin solution So true did this medicament maintain its digestive powers that the remaining trachomatous granules gradually disappeared, and the pannus began to thin perceptibly, finally, after a course of constant medication with the before mentioned medicament, extending over a period of three months, such a marked change had transpired that the patient was able to get about unattended, and with the application of suitable glasses can read ordinary newspaper type at the distance of twelve inches and Snellen's D-18 at eighteen feet When the process of clearing had reached its maximum degree the admirable operation designed by Dr Hotz was instituted for the removal of the entropion, and thus the lids were placed more nearly in normal apposition to the eyes, and the gentleman to-day rejoices in a very fair amount of vision in spite of many gloomy predictions to the contrary The second case was that of a woman aged 30, who was suffering with chronic granulations and a pannused state of both corneæ, though the pannus was not quite so dense as in the preceding case Here the same favorable results ensued, the granulations gradually absorbing, the hypertrophic papillæ disappearing and the pannus progressively diminishing in density until a fair amount of vision was restored to an individual who had abandoned all hope of ultimate recovery The granulations melted away like a piece of ice in full sunlight and apparently had no tendency to reappear A third case in which I applied the remedy is that of a woman aged 35 who had sustained a siege of trachoma affecting both eyes with consequent pannus of the vascular type, and in this case as in the preceding, a diminution of all the inflammatory symptoms ensued together with pronounced thinning of the pannus, and perceptible clearing of the corneæ with great improvement of vision, and I am convinced by the foregoing cases that we have in the digestive ferments, particularly papoid, a very efficient and safe digestant applicable in these cases

The argument will no doubt be advanced that it is not possible to digest living animal membrane to a degree sufficient to warrant the application of the remedy in such cases, but in opposition thereto, I hold that the new growth is necessarily of low vitality, depending as it does for its nutritive pabulum upon the conjunctival and embryonic vessels peculiar to itself, and is largely composed of lymphoid structures which have appeared to be particularly susceptible to the digestive influence of the ferment In order to demonstrate its powerful digestive qualities I immersed a densely leucomatous eye which had been blinded by smallpox and recently enucleated and present it herewith for your inspection You will notice that it is almost completely digested It is now one week since the eye was thus treated, the strength of the solution being 30 grains to the ounce, and indeed it had reached its present state of digestion on the second day of its immersion which indicates that papoid exhibits powerful digestive qualities when brought in contact with animal membrane, and certainly if it is capable of virtually digesting the cicatrized envelope of an eye, which as we know even in a normal condition is quite resistant to the action of chemical agents generally, its effect in this instance is strikingly suggestive, and leads to the conclusion that its digestive properties have not been over estimated In an article entitled, "Some Observations on the Clinical Uses of Papoid," by Dr Arch Dixon of Kentucky, he states that "he has used papoid with marked benefit in diphtheria, membranous croup and indolent ulcers, and as a solvent for dead bone" My own experience while still limited, leads me to confirm his conclusions when he says, "that papoid under papoid conditions produces greater results than pepsin under pepsin conditions" I have made application of pepsin, both in solution and in powdered form in cases of granular conjunctivitis associated with pannus, and have not reached the satisfactory results that I was able to obtain with papoid

Dr Taylor—In what proportion is papoid and boric acid used, and how often is the application made?

Dr Lydston—I apply the remedy twice a day in the treatment of pannus, the patient being willing to come to my office that often, otherwise I apply it only once a day I use equal parts of papoid and boric acid

Dr De Schweinitz—In what strength do you use the remedy, how do you apply it and what is the reaction?

Dr Lydston—I take equal parts of papoid and boric acid, after mixing them thoroughly I dust the mixture on the cornea by means of a camel's hair brush, only a slight reaction following

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SELECTIONS

Pathological Models at the World's Fair

In order to draw attention to some of the exhibits from the Pathological Institute of Berlin University, now on exhibition at the World's Fair, we reprint herewith Dr Berliner's account of these from an article originally published in the *Deutsche Med Wochenschrift*

"Plastic Reproductions of Preparations from Pathological Anatomy, by Dr Paul Berliner, Berlin, Germany In any demonstrative science, clinical instruction is of the greatest importance, therefore every teacher of medicine, whenever possible, endeavors in his lectures to help his hearers to an easy comprehension of his subjects, either by exhibition of a patient, of pathological preparations and instruments, or corresponding illustrations of the same For this reason, also, medical literature contains abundant illustrations, for the production of which all forms of graphical methods are brought into use However, notwithstanding the perfection of photographical, chromographical and similar illustrations, medical science often presents to the student cases in which the mere physical aspect, or gross anatomy, is insufficient, and a plastic representation is necessary for a clear understanding thereof This is especially true when applying to dermatology, embryology, or normal and pathological anatomy If, therefore, from the plastic reproduction (or representation) the model is perfected by careful coloring copied from the original, it should certainly be the most complete way of permanently presenting those natural objects which are themselves rapidly perishable, and retaining the peculiarities of their changeable, or temporary appearances and conditions The combination of "polychromy" with plastic art makes it possible to produce objects wonderfully similar to the fresh, natural preparation

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The anatomical museum in Vienna contains a few wax models made by Dr Dom Bastler, a practicing physician of that city in the earlier part of this century At the present time these anatomical wax preparations are made princinone of us could afford to miss its annual meeting and thus the prosperity of the section would be generally enhanced In the publication of our special bound volume I would suggest that the discussion should also be included so that any unusual views presented by the author of a paper should stand in juxtaposition to the expressed views of his colleagues

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PANNUS AND ITS TREATMENT BY THE DIGESTIVE FERMENTS

Read in the Section of Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY JAS A LYDSTON, M D , Ph G

Formerly Professor of Inorganic and Medical Chemistry and Lecturer on Diseases of the Eye and Ear, Chicago College of Physicians and Surgeons, Chicago, Ill

The etiology and course of pannus are so fully appreciated that it will not be necessary to consume valuable time by entering into a lengthy description of the disease, suffice it to say for the purposes of my paper that inasmuch as pannus is one of the most frequent sequelæ of trachoma I shall limit my remarks to the so-called granular pannus, that is, that form in which the formation of granular masses in the corneal layers has caused infiltration and vascularity of the corneal surface

In this type, the morbid changes first begin to assert themselves in the upper margin of the cornea at the limbus conjunctivæ and we note further that its tendency to clear is in direct proportion to the degree and duration of the inflammatory process, in other words, the further the process departs from the character of a simple infiltration throughout the more ominous will be the prognosis and, indeed, in the light of our present knowledge bearing on this subject we know that complete reparation after pannus which implicates the deeper corneal layers is a forlorn hope, but in all cases in which the cell migration which constitutes the infiltration in pannus is confined to the corneal region lying between the anterior elastic lamina or Bowman's membrane and the corneal epithelium there is an intrinsic tendency to clear In proportion, however, to the increased aggregation of cells, Bowman's membrane undergoes atrophic changes and finally is obliterated, thus permitting the process to extend more deeply From a histological standpoint, pannus proves to be a layer of newly formed, soft, cellular tissue greatly simulating in appearance the infiltrated trachomatous conjunctiva This tissue is more or less vascular and occurs in more or less typical layers imparting an uneven nodular aspect to the growth Special terms have been assigned to the disease which are to a certain extent descriptive of pannus in the several types, thus we have pannus tenuis, which indicates a recent pannus exhibiting no great thickening, again, pannus vasculosus, signifies the vascular type, and pannus crassus or carnosus implies a very dense pannus, still further, we have pannus sarcomatosus, which is an unfortunate term, inasmuch as it generates confusion with neoplasms, finally, we have pannus siccus which is mostly composed of connective tissues, there being few or no blood vessels

In the management of this class of cases the preeminent notion heretofore has been to cure the conjunctival affection from which the disease takes its departure, it being held that the pannus will spontaneously disappear, with this object in view various therapeutical measures have been resorted, to such as are usually exhibited in the treatment of trachoma, for example, nitrate of silver in solution or substance, sulphate of copper in solution or in the form of "blue stick" as it is called, and the various antiseptic measures have all found fitting application, and even the more radical measure of inoculation, either with the pus of an acute blennorrhea as advised by Piringer and Jaeger, or the milder method of jequirity treatment first advocated by De Wecker In conjunction with the foregoing ponderous array from the therapeutical armamentarium the surgical procedures of syndectomy, iridectomy and sclerotomy, and even an attempt at radical removal of the growth by scraping as advised by Gruening have all been utilized in these cases, and notwithstanding the great mass of literature that has accumulated in the course of time, we are still far from a unity of views with respect to the treatment of pannus Within the last year I resorted to a mode of treatment which was particularly pleasing to me in its results and I herewith present an outline of the course adopted, not with any idea that it will wholly supplant the foregoing measures, but if it proves as efficient in the hands of others as in my own, that it may become an advantageous auxiliary in the management of such cases I refer to the treatment of pannus, particularly that type characteristic of trachoma by the digestive ferments The first case in which I employed a digestive ferment was in that of a man aged 45 who had suffered with trachoma and its ravages for a period of eight years Papillary hypertrophy and trachomatous granules were still quite noticeable, together with very perceptible atrophy of the conjunctiva tarsi and a very pronounced pannused condition of both corneæ, which rendered it impossible for the patient to get about unattended Entropion had also supervened Viewing pannus as a new growth more or less vascular in type, I surmised that if I could but bring a medicament in contact with it that possessed powerful digestive properties I could favor its removal, and with this object in view I resorted to daily inspersions of powdered papoid with boric acid Papoid is the new proteolytic agent derived from the carica papaya or papaw plant, and bids fair to become a most valuable addition to our materia medica This agent exhibits the power of digesting all types of proteid and albuminous substances, both in a coagulated and uncoagulated form, and its digestive properties are still further enhanced by the fact that it acts in acid, alkalin and neutral media, though, as my experience demonstrates, more pronounced in alkalin solution So true did this medicament maintain its digestive powers that the remaining trachomatous granules gradually disappeared, and the pannus began to thin perceptibly, finally, after a course of constant medication with the before mentioned medicament, extending over a period of three months, such a marked change had transpired that the patient was able to get about unattended, and with the application of suitable glasses can read ordinary newspaper type at the distance of twelve inches and Snellen's D-18 at eighteen feet When the process of clearing had reached its maximum degree the admirable operation designed by Dr Hotz was instituted for the removal of the entropion, and thus the lids were placed more nearly in normal apposition to the eyes, and the gentleman to-day rejoices in a very fair amount of vision in spite of many gloomy predictions to the contrary The second case was that of a woman aged 30, who was suffering with chronic granulations and a pannused state of both corneæ, though the pannus was not quite so dense as in the preceding case Here the same favorable results ensued, the granulations gradually absorbing, the hypertrophic papillæ disappearing and the pannus progressively diminishing in density until a fair amount of vision was restored to an individual who had abandoned all hope of ultimate recovery The granulations melted away like a piece of ice in full sunlight and apparently had no tendency to reappear A third case in which I applied the remedy is that of a woman aged 35 who had sustained a siege of trachoma affecting both eyes with consequent pannus of the vascular type, and in this case as in the preceding, a diminution of all the inflammatory symptoms ensued together with pronounced thinning of the pannus, and perceptible clearing of the corneæ with great improvement of vision, and I am convinced by the foregoing cases that we have in the digestive ferments, particularly papoid, a very efficient and safe digestant applicable in these cases

The argument will no doubt be advanced that it is not possible to digest living animal membrane to a degree sufficient to warrant the application of the remedy in such cases, but in opposition thereto, I hold that the new growth is necessarily of low vitality, depending as it does for its nutritive pabulum upon the conjunctival and embryonic vessels peculiar to itself, and is largely composed of lymphoid structures which have appeared to be particularly susceptible to the digestive influence of the ferment In order to demonstrate its powerful digestive qualities I immersed a densely leucomatous eye which had been blinded by smallpox and recently enucleated and present it herewith for your inspection You will notice that it is almost completely digested It is now one week since the eye was thus treated, the strength of the solution being 30 grains to the ounce, and indeed it had reached its present state of digestion on the second day of its immersion which indicates that papoid exhibits powerful digestive qualities when brought in contact with animal membrane, and certainly if it is capable of virtually digesting the cicatrized envelope of an eye, which as we know even in a normal condition is quite resistant to the action of chemical agents generally, its effect in this instance is strikingly suggestive, and leads to the conclusion that its digestive properties have not been over estimated In an article entitled, "Some Observations on the Clinical Uses of Papoid," by Dr Arch Dixon of Kentucky, he states that "he has used papoid with marked benefit in diphtheria, membranous croup and indolent ulcers, and as a solvent for dead bone " My own experience while still limited, leads me to confirm his conclusions when he says, "that papoid under papoid conditions produces greater results than pepsin under pepsin conditions " I have made application of pepsin, both in solution and in powdered form in cases of granular conjunctivitis associated with pannus, and have not reached the satisfactory results that I was able to obtain with papoid

Dr Taylor—In what proportion is papoid and boric acid used, and how often is the application made?

Dr Lydston—I apply the remedy twice a day in the treatment of pannus, the patient being willing to come to my office that often, otherwise I apply it only once a day I use equal parts of papoid and boric acid

Dr De Schweinitz—In what strength do you use the remedy, how do you apply it and what is the reaction?

Dr Lydston—I take equal parts of papoid and boric acid, after mixing them thoroughly I dust the mixture on the cornea by means of a camel's hair brush, only a slight reaction following

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SELECTIONS

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The anatomical museum in Vienna contains a few wax models made by Dr Dom Bastler, a practicing physician of that city in the earlier part of this century At the present time these anatomical wax preparations are made principally in Paris and Lille, from whence they are exported all over the continent Most of that class of models exhibited in Germany, particularly those of a pathological character, are of French origin Most famous in Paris is the Musè Baretta in the Hospital St Louis, as is also the syphilographic collection of "Jumelin "

Among other manufacturers should be mentioned "Tramond" of the medical faculty of Paris University He has published a voluminous catalogue of his preparations

The department of Pathological Anatomy of the Berlin Charité, possesses a collection of models which were made by Dr Felix Thibert of the Paris University

Prof Schuller, in a recently published account of his travels, states that most of the North American Universities also make use of wax models in their didactic and clinical lectures, and Prof Schuller informs me these have also been imported from Paris

In Germany, models of normal anatomy are manufactured in Munich and Dresden, and a Dr A Ziegler of Freiberg, furnishes preparations for the study of embryology

Herr Lassae of Berlin, has directed his attention to the plastic reproduction of skin diseases, and has laid the foundation for a large collection of dermatological wax models which are reproduced from material furnished by his clinics

As for myself, I at first made plastic preparations from only the skin clinics of the Breslau University, but soon made use of them in other departments of pathology, especially from diseases peculiar to the viscera I believe I can claim the right of priority in the introduction of the last named preparations My *intention* is to *introduce* this method of reproduction more generally by such preparations, and I believe it is deserving of more attention from the medical profession than has heretofore been accorded it The practical advantages of these preparations from whatever medical specialty they be taken, is that while in possession of these artificial reproductions one has always at hand an exact imitation as to size and coloring of the original, and can make use of them while teaching, either for demonstration or comparison with other preparations Herein lies also the advantage of this method of illustration over the use of the originals, which being preserved in fluids are subject to constant change in form and coloring Also the rapidly changing appearances on the living subject afford only a more or less unsatisfactory objective picture of the disease in question, and therefore with the model we possess a permanent reproduction or appearance of the different morbid conditions and are not obliged to depend on memory, or the individual conception of a single observer

There are important manifestations of certain diseases which the medical man during his student years finds no opportunity to become familiar with, perhaps because of the lack of clinical material or because during his course of clinical study these diseases were not prevalent at the time, but nevertheless diseases which every physician must be familiar with, as for instance the exanthema of typhus, etc In such cases a model perfectly true to nature may well serve for instruction and demonstration, in default of clinical material Among the various departments of medicine in which these plastic preparations are serviceable besides dermatology, is normal and pathological anatomy, and all the different newer methods of surgical operation, which can be well demonstrated on the plastic models Also certain conditions and appearances which are to be clinically observed on the patient resulting from the treatment in hand, can be permanently fixed and reproduced by this plastic method I have thus illustrated by these models in the skin clinics of the University of Breslau, the continuous manifestations of lupus affections which took place under the tuberculin treatment of Koch This should clearly demonstrate the value of these plastic preparations, for now that the above treatment has been abandoned, they offer for present and future consideration a vivid conception of those therapeutic measures which caused so much excitement in the medical world On the other hand, they will serve as objects for comparison and demonstration in case of renewal, improvement or adoption of another method of treatment

During epidemics, pathological changes in single organs, which differ according to the virulence of the poison, can be obtained and preserved in the same manner

These preparations are made by first taking a plaster cast of the subject to be reproduced This mold is then filled with wax made liquid in a water bath, and a positive is thus produced The model is then carefully painted with oil colors, true to nature Later, various varnishes are applied to give to it the moist appearance of the fresh or living tissue, and upon the correct imitation of which it depends

The most difficult part of the work is the correct coloring, and this is especially true in pathological more than in dermatological preparations In skin diseases the lesions are generally more scattered and better defined, while in pathological subjects the whole surface must be correctly reproduced in its natural coloring

Among the preparations exhibited by Dr Berliner are mentioned the following

1 Rectum, showing syphilitic changes of the mucous membrane Five cm from the anus a scar contraction On the anus itself, a large hemorrhoidal tumor Further, a rectal ulcer after cauterization with the Paquelin cautery showing where healing had commenced Slight edematous swelling and pigmentation of the mucous membrane The submucosa and muscular coats are plainly shown in the drawing

2 Kidney of new born infant, with uric acid infarcts (lues congenita)

3 Aorta—endarteritis deformans (with atheromatous degeneration) Chronic enlargement (or dilatation) of the aorta

4 Stomach with gastritis proliferans showing scattered spots or areas of hyperemia on the mucous membrane

5 Stomach with secondary carcinoma of mucous membrane (metastatic)

6 Liver—Chronic interstitial hepatitis, with jaundice (cirrhotic)

7 Lungs, with emphysema collapsed after opening chest cavity Broncho pneumonic hepatization in lower lobes

8 Lungs, showing active hyperemia

9 Section of lung with multiple cheesy deposits (pneumonic) Bronchial and peri bronchial inflammation

10 Section of lung showing recent pleurisy Excessive thickening of the pleura

11 Larynx with polypus on under half of right vocal cord

12 Larynx with syphilitic ulceration of the epiglottis

13 Larynx with tubercular changes

14 Puerperal uterus with septic infection

15 Thrombus of right femoral vein

NOTE —Nos 1 and 2 are at present in the possession of Herr G Lewin director of the skin clinic of the Royal Charité

Nos 11 12 and 13 are in the possession of Herr Prof Dr Fränkel, director of the clinic for throat diseases of Royal Charité Hospital

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Memorandum of a Case of Hydatids of the Kidney, with some Remarks —By John B Hamilton, M D , LL D , Chicago, Ill Professor of principles of surgery and clinical surgery in Rush Medical College

In January, of this year, a young Dane came into my clinic as a patient, complaining of occasional attacks of renal colic On inquiry he stated that he had noticed after these attacks, certain white substances which his imperfect knowledge of English prevented him from describing I directed him to return when he was next attacked by colic, and enter the hospital

About the first of February he returned and I was enabled to see the substances passed with the urine, and I found them to be capsules of ecchinococci Careful examination was then made by abdominal palpation and the kidney was found enlarged to a considerable degree The patient's general condition did not seem to be affected, and his sole annoying symptom was the recurrent attacks of renal colic

Examination of the urinary deposit under the microscope showed the hooklets of the ecchinococci in limited numbers, and on February 4, 1893, at the Rush Medical College clinic, I cut down upon the kidney by lumbar incision made parallel with last rib The kidney was exposed and the perinephritic space packed with iodoform gauze, and an incision made directly through the kidney toward the pelvis The fluid contents of the cyst escaped through the wound, and daughter cysts round, white and shining, rolled out of the incision in great numbers Irrigation was then practiced, and the parent cyst having been entirely emptied of its contents was flushed with iodin water, and the wound was packed to the bottom with iodoform gauze The patient was comfortable after the operation, progressed toward a rapid convalescence and was well in four weeks

Although hydatids of the liver are comparatively common, those of the kidney are infrequent, and it is on account of this circumstance that I venture to present this brief case report There is now little dispute concerning the treatment of ecchinococci of the kidney, when a diagnosis is made, free incision is obviously the only correct procedure, but there is yet much to learn concerning the etiology and mechanism The dog, wolf and kangaroo have the general reputation of being the original host of these ecchinococci Their habitat is in the small intestine of those animals There is circumstantial evidence to corroborate this reputation in the fact that it is precisely in those countries where dogs and the animals named are more common that the ecchinococcus disease is most prevalent Iceland and Australia have the preeminence in frequency Cobbold states that in Iceland one-sixth of the mortality is caused by hydatid disease

Thomas published statistics of 7,156 cases of ecchinococcus disease observed in the hospitals of Australia He found 59 66 per cent located on the liver, 16 44 per cent located in the lungs, 2 55 per cent located in the epiploon and peritoneum, and 1 90 per cent located in the muscles Thomas, in 307 cases, found only two located in the kidney, but in Davaine it is stated that of 566 cases of ecchinococcus disease, thirty had their seat in the kidney One fact is noted in regard to hydatids of the kidney which seems to have no reasonable explanation, that is the greater frequency of the disease in the left than in the right kidney I am not prepared to offer even an hypothesis as to this fact which has been noted by all systematic writers on the subject

The allegation that the disease is more frequent in women than men might have an explanation in their greater fondness for pets, and the habit of kissing them

The statistics of ages of persons known to be affected by hydatid disease, vary from six years to sixty-five years, but the average is between twenty and thirty years

The practical lesson from these cases is that the disease is preventable, and appropriate hygienic measures should be adopted by those engaged in the slaughter of animals These measures consist in the care to be taken that no cystic tumors shall be allowed to go with the other offal, but be burned in a crematory, and by persons handling dogs that they do not kiss them, or allow the dog to lick the face My patient admitted that he had eaten raw meat, and kept several dogs, from either of which sources he might have obtained *the ova* of the cestoid —*Kansas City Medical Index*

Calomel as a Topical Application to Hemorrhoids —Dr J B James has written in favor of the above treatment, in *British Medical Journal* He states that he has for several years made use of calomel as a topical application to piles His success has been quite marked, especially in cases where inflammation has been produced in the abnormal tissues, characterized by mucous discharge and hemorrhage Under this simple treatment the annoying symptoms were generally soon relieved, and the patient absolved from the necessity of undergoing a perturbating course of treatment This method leads to the frequent ablution of the parts, and cleanliness is of itself curative in not a few instances The calomel is a cleanly kind of application, and commends itself to the patient for frequent and regular application It is readily applied and does not stain the clothing

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SOCIETY NEWS

American Dermatological Association

Abstract of the Proceedings of the Seventeenth Annual Meeting, held in Milwaukee, Wisconsin, September 5 and 6, 1893

(Continued from page 506)

Dr E B Bronson of New York, followed with a paper entitled

THE TREATMENT OF PRURITUS

The author said in the management of *pruritus essentialis*, as of any other disease, the first consideration should be directed to what caused the trouble The adoption of measures tending to remove any accidental conditions or influences through which pruritus might be occasioned is important Such causes include, besides various local sources of irritation, certain remote or general diseases and furnish the *indicatio causalis* in its more limited sense This, however, states the scope of the problem only partially What is of more importance is to establish principles of treatment fitted to those more special and more essential causes that constitute the necessary conditions of the disease and whence we derive the *indicatio morbi* These causes are traced under etiology, and it is they which must afford the only intelligent basis for the therapeutics of pruritus

The chief underlying condition in pruritus is hyperæsthesia, whether in its common significance of an excessive irritability of the sensory nerves, or in the sense of an excess or engorgement of sensation The prime indications, then are to allay irritability and to divert or annul the excess of nervous excitement Measures to remove local excitants include first of all, such as directly tend to prevent scratching To admonish the patient to refrain from this is usually of little avail Restraint may be possible during waking hours, but at night, when the trouble is always at its worst, and especially during the state of somnolence midway between sleeping and waking, no power can prevent it It can only be avoided by first mitigating the lesion through the aid of anti-pruritics Sedatives when used internally are apt to be disappointing The degree of general sedation that is required to affect the nerves of the skin in so intense a disturbance as pruritus often is, affords a sufficient reason why this method of treatment is usually objectionable Further than this, the depressing and atonic after effect on the nervous system tends to exaggerate the general hyperesthesia which is already essentially an atonic condition, and thereby increases the tendency to itching Especially objectionable are most of the narcotics The bromids, on the other hand, are often indispensable and may be required in liberal doses It is important to avoid the enervating effects of loss of sleep, and for this purpose sulphonal or some other hypnotic is occasionally needed In connection with this, two internal remedies which have been recommended by Bulkley are worthy of mention, and they are cannabis indica and gelsemium The former is known to be a cutaneous anesthetic as well as an analgesic, and by virtue of the former quality should be useful in pruritus

Carbolic acid is the most reliable and most generally useful anti-pruritic which dermatologists possess, It was well named by Unna "the opium of the skin"

The following "anti-pruritic oil" has been much employed by the author for years, both in local and so called universal forms of the disease, with no more untoward results than now and then a trifling dermatitis, when through oversight the patient has been allowed to make the applications too frequently, or has continued them too long The formula is

℞ Carbolic acid, ʒi–ii
Liquor potass, ʒi
Ol lini, ℥i
Sig Shake before using

To correct the disagreeable odor of the linseed oil a drop or two of bergamot may be added Salicylic acid and salol though less energetic in their effects, act similarly to the carbolic acid Thymol is also an admirable anti-pruritic, but on account of its irritating effect can not be used when the skin is sensitive

The author then dwelt on sensory stimulants, substitutive irritants, alteratives of cutaneous nutrition, and motor depressants In pruritis hiemalis an all important measure of treatment is protection against cold The sole cause of winter pruritus, aside from a special predisposing hyperæsthesia, is lowered temperature

Dr Joseph Zeisler of Chicago, Illinois, read a paper entitled

ANGIOKERATOMA,

and reported the following case The patient was a German, and 53 years of age, butcher by occupation Had never had any severe illness, but had malaria once Present illness began somewhat gradually about four years ago with red spots and verrucæ on the skin of different parts of the body He was under medical treatment and says he improved for a time He states that some of the red spots gradually disappeared at times, but returned and new ones arose in different localities During all this period his general health had not suffered in the least No anorexia, headaches, nor any other complaint There is no pain or itching in the skin lesions Patches of vitiligo of large size are found on the front and sides of the abdomen and on the right side of the thorax Some small patches in right axilla Faint patches on right side of chest posteriorly and on the neck Large patches on the penis and scrotum and small ones on the inner surface of the thighs There are some old marks of tinea favus on the scalp Nævus-like spots and small tumors are scattered over the body as follows On posterior surface of right ear are two small warts, red in color and vascular, one on posterior aspect of left ear On the ulnar surfaces of both forearms, beginning over the olecranon, are found red nævus-like patches of irregular contour and smaller isolated ones in the form of small pedunculated tumors The patches vary in size from three or four inches in circumference to the size of a dime They are red in color, vascular and slightly raised above surface of surrounding skin On the right forearm are numerous small tumors varying in size from minute spots to some the size of a hazel-nut The larger ones are all pedunculated, firm and vascular On the left forearm they are fewer in number Considerable œdema in the right hand and fingers Only one or two small warts on the extensor surface On palmar surface there are some on every finger except the index, and none on the wrist and ball of the thumb One was removed and found to consist of an outer layer of thickened epidermis surrounding a very vascular center Microscopical examination was made by Dr Zeisler Some of these tumors sprang out from beneath the finger-nails On the left hand the verrucæ were not so numerous and inclined more to the small vascular variety with two exceptions Large irregular red patches were also found over each patella, and a few smaller ones irregularly scattered over anterior aspect of the legs and thighs, also a few smaller ones over the posterior aspect of thighs and one over the back of each ankle Two small peduculated warts were also found on the back of right leg, another with some of the red patches on the nates near the gluteal fold No patches or tumors were found on abdomen, thorax or upper part of arms

The author reported this unusual and interesting case to show that the clinical picture of the disease is evidently not yet quite complete, and hoped that new examples of the disease would arise which would throw more light on the pathology and etiology of the affection

Dr J A Fordyce of New York, read a paper entitled

A CONTRIBUTION TO THE PATHOLOGY OF ACNE VARIOLIFORMIS (HEBRA)

Dr Fordyce called attention to the case described by Dr Bronson and himself in 1891 under the title of "Acne Varioliformis of the Extremities," which was at that time shown to originate in or about the coil glands This was identical with cases since reported by Politzer, Dubreuilh and others under the name of hydradenitis, and should go on record as an example of that affection While clinically it presented many points of similarity to acne varioliformis (Hebra), its pathological anatomy was quite distinct

The writer had examined microscopically a number of papules and papulo-pustules from two typical cases of the latter disease, and was able to trace its beginning to an inflammation about the middle and upper portions of the hair follicles and their sebaceous glands, while the coil glands were shown to be outside the inflammatory area Enormous numbers of staphylococci were found in sections from one of the cases examined which readily stained with Kuhne's carbolic-methyline blue solution These organisms were especially numerous about the middle and deeper portions of the hair follicles and contained within the external and internal root-sheath, in the connective tissue about the coil glands and in the subcutaneous connective tissue In considering their number, distribution and presence in the diseased area before the epidermis was involved, the writer was disposed to consider them a direct influence in producing the lesions In a secondary infection they would scarcely be found at so early a period in the evolution o the papule

As a result of his investigations, Dr Fordyce concluded that acne varioliformis (Hebra) was an inflammation of the pilo sebaceous system, of microbic origin, leading to destruction of these organs, and that Bazin was correct in naming the disease acne pilaris

The members of the Association, at the close of Dr Fordyce's paper, participated in a general discussion on pityriasis rosea, and pemphigus

The following officers were elected President, Dr Robert B Morison of Baltimore, Md , Vice-president, Dr George T Jackson of New York, Secretary and Treasurer, Dr Charles W Allen of New York, Member-at-Large of the Council, Dr J A Fordyce of New York

On motion, the Association adjourned to meet in Washington, D C , in May, 1894

The Missouri Valley Medical Society, at its meeting held in Council Bluffs, Iowa, Sept 22, elected the following officers

President, Dr A F Jonas of Omaha, first vice president, Dr A L Wright, of Carroll, Ia , second vice president, Dr Daniel Morton of St Joseph, Mo , treasurer, Dr T B Lacy of Council Bluffs, secretary, Dr F S Thomas of Council Bluffs The next meeting place will be at Omaha

The Cedar Valley Medical Society —The annual meeting of the Cedar Valley Medical Society will be held in Dubuque, Iowa, Tuesday, October 10 Papers will be read by the following Drs J W Jaggard, Chicago, Ill , J S Lewis, Dubuque, G F McDowell, Clear Lake, W Woodbridge, Central City, E C Dudley, Chicago, A R Brackett, Nashua, E Hornibrook, Cherokee, C L Whitmire, Waverly, H C Jungblutt, Sumner

The meeting will be followed by a luncheon Dr I S Bigelow is president of the Society and Dr W B Small, of Waterloo, is secretary

The Southern Surgical and Gynecological Association will meet in New Orleans on the 14th, 15th and 16th days of November The medical profession are cordially invited to attend Dr Bedford Brown of Virginia is president, and Dr W E B Davis of Birmingham Ala , secretary

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ASSOCIATION NEWS

We clip the following from our valued and always welcome contemporary, the *Occidental Medical Times*

Oregon and the Association —Dr Plummer informs us that a member of the Association from Oregon writes to say that he wishes to present the different sections with a souvenir of their visit to the Pacific coast that shall be typical of the State of Oregon This incident indicates the interest in the Association that is being rapidly developed, and augurs well for the success of the meeting

The San Francisco County Medical Society —At the last meeting of the San Francisco County Medical Society, Dr C G Kenyon, the President of the State Society, brought up the subject of the meeting of the Association in '94, After some discussion the Society appointed a committee to cooperate with the Committee of Arrangements of the Association

Coming to California —Dr H Bert Ellis of Los Angeles the Assistant Secretary of the Association, informs us that he is already constantly in the receipt of letters from members of the Association who are preparing to attend the meeting He says that several of his correspondents want to come on in advance and stay all winter—we presume in Los Angeles

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES . . . . 10 CENTS.

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE., CHICAGO, ILLINOIS.
All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues and subscription for THE JOURNAL. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly.

SATURDAY, OCTOBER 7, 1893.

THE PLACE OF ERGOT IN OBSTETRIC PRACTICE.

There is probably no therapeutic application of a drug so constantly carried out as the administration of ergot in obstetrics, and yet this being the case there is no doubt that in many instances it is wrongly administered because it is not needed, because it will do harm and finally because it is given at such a time that uterine contraction is voluntarily or artificially produced by other means before the ergot is absorbed, and so it exerts its action long after the object of the physician has been accomplished. On the other hand, as pointed out by BOHN in the JOURNAL of Sept. 23, 1893, there are very good reasons for this routine practice. It is positively certain that postpartum hemorrhage can almost always be avoided, even in feeble patients by its use, and in cases where there is no trained nurse in attendance and the doctor can not remain for some hours near his patient it must be given, without exception, if the safety of the case is to be assured and the physician is to have his mind at rest. In the discussion of the paper it will be remembered that DUFF expressed doubts as to the harmlessness of the routine use of ergot, as he had already done in a paper in the *Therapeutic Gazette*, in which he asserted that ergot was apt, by producing contractions of the uterine muscle at the cervix, to lock up dèbris which might when imprisoned produce septic trouble. Practically, however, we do not believe that such an accident is liable to occur. On the other hand, it is undoubtedly a fact that the contraction of the uterine walls produced by ergot, drives out of its cavity blood and other materials, and finally it is certain that these substances are more septic in themselves and are not readily changed to a septic state, unless the obstetrician has passed his hand or instruments into the cavity of the uterus and so infected them.

The rule which should govern the use of ergot in labor is hard to define. As with all rules governing the use of drugs, its application depends more upon the judgment of the physician than upon a written law. *Ergot must not be used too early lest the child and mother be injured*, neither must it be used too late. As it takes almost an hour for the dose to be absorbed, when given by the mouth, the influence of the drug on the uterus can not be felt for that period, and there is therefore no danger in giving the drug as soon as the physician is certain that labor will be over, at least so far as the truth of the head is concerned, in half to one hour. We therefore believe *that ergot is to be used in almost every case where* the physician can not be at hand the instant hemorrhage or uterine relaxation is threatened, and that the practice so generally followed is productive of an amount of good which far outweighs the few instances in which it may not produce the best of results.

PROPHYLAXIS OF CHOLERA—RAPID DISINFECTION.

At the session of the Academy of Medicine of Paris on the 19th of September, M. LE FORT presiding, M. BROUARDEL invited attention to the fact that at the preceding session M. BABES had read a memorial showing that in 1890 Roumania, contrary to other countries of Europe, had escaped the cholera epidemic, thanks to quarantines which, following the ancient system had been applied in all their rigor. This rigor had been such that they had not hesitated to shoot two persons who had tried to force the land quarantine. On the contrary, in 1893 when the quarantine had not been applied, Roumania had been invaded by cholera in the same measure as the neighboring countries. From this M. BABES has leaped to the *conclusion that the Dresden* conference had in suppressing land quarantines adopted a fatal measure. "It is not doubtful," said M. BROUARDEL, "that the suppression of quarantines, pure and simple, without replacing them by similar measures, more simple than the former, in effect exposes Europe to the cholera infection, but such is not the result of following the conference of Dresden."

In the presence of the great inconveniences of the quarantines, which permitted disinfection by aeration and, above all by time, it was asked if it were not possible to obtain the same result by means of rapid disinfection. It is easy to see that the existing measures adopted by the powers represented at Dresden, are precisely those which were the objects of the conference as indicated in the question proposed. These measures were pointed out to be such as disinfection by sterilizers, isolation of the sick, traveling card to be carried by well persons, etc. These statements of M. BROUARDEL are reassuring, for they show that inspection is not proposed to be abandoned by the French, but only simplified and hastened

EDUCATIONAL MODELS

We print elsewhere a report by Dr Berliner on the method of preparation of models which will be read with interest for, although originally printed a twelvemonth ago, the bringing of some of them to America as part of the German educational exhibit at the World s Fair, makes the description fresh and entertaining

Teaching is but dry work without models or demonstrations, and one might as well undertake to teach practical anatomy by book, as pathology without diagrams and illustrations, as well also might the student learn the art of opera dancing by nightly observation of the ballet, as to learn the delicate handling of the scalpel without long practice on the cadaver Our students require more practical training than ever, for it is not less true now than in the days of King Agesilaus, whose answer, when asked what a boy should learn, was, "that which they ought to do when they become men" Medical colleges have been rather slow in the adoption of the educational methods in use in other branches of learning, but they now seem pressing forward in the right direction and, as in agriculture, certain preparation of the soil must precede the planting, so the object lessons of the schoolroom prepare the mind of the student for the technical models of the medical school, and for the severer test questions of daily life, when school days are long past

THE SANITARY MODE OF OATH ADMINISTRATION IN THE COURTS

The *London Lancet* and the *Sanitary Record* have been foremost in counseling abandonment of the "kissing of the book" by witnesses in the courts of justice It is practically an act of injustice, oftentimes, this long standing custom of bringing together, through the medium of the book, face to face and mouth to mouth, the cleanly and healthy, the uncleanly and infected A physician of London has recently been the subject of considerable public comment for declining, on sanitary grounds, to take the book oath The following is a condensed account of the recent occurrence taken from the *Pall Mall Gazette*

> "'Kissing the book' is likely before long to become one of the lost arts Another objector to the practice has turned up in the West London Police Court in the person of Dr Morris Wallace, called to give evidence in a case where one woman was charged with stabbing another in the eye with a fork The doctor said he had no religious scruples, but he considered that there was a risk to health involved in putting to his lips a book which had already been kissed by other people The magistrate suggested as a compromise kissing the inside of the volume But here, too, the doctor objected 'on sanitary grounds,' and he was finally sworn by holding up the right hand"

This may be the beginning of a "reform movement," and if so, it is only natural to see a medical man stepping to the front Not a few of our medical acquaintance habitually adopt the oath by affirmation, instead of the traditional method, in regard to which, it is no slander to remark that it is more honored in the breach than in the observance

MEDICAL EDUCATION

The Illinois State Board of Health at its last meeting, decided to resume the publication of the reports on medical education For the last two years, owing to various causes, none have been printed Dr J Collins Warren, President of the Section of Pedagogy of the Pan-American Medical Congress, in his address, after reviewing the subject in this country, says

"The reports on medical education by the Illinois Board, I do not hesitate to say have exerted a more powerful influence on the movement in education than any other publication which our medical literature has produced"

This is undoubtedly true These reports were object lessons to the profession and to the schools, and presented truthfully the status of the colleges Dr F W Reilly is now engaged in preparing the forthcoming report He is eminently qualified for the task, having assisted in the preparation of nearly all the reports that were issued by the Board

CHICKEN POX OR SMALLPOX

The death of Dr Thomas Richards at North Brothers' Island of smallpox is very sad It may be said to be the result of mistaken diagnosis, and carelessness upon his part in not being properly protected by vaccination He contracted the disease from a case of supposed chicken pox that was brought before the Vanderbilt clinique, which afterward proved to be smallpox

This is not the first time that a mishap of this character has occurred It is simply impossible always in the early stages to differentiate these diseases The man who says he can always diagnose a mild case of smallpox or varioloid has only encountered typical cases, or has had but a limited experience Experience has taught that the only safe way is to treat such cases as suspects, and wait for development Bringing uncertain cases of this character before classes during a clinique is unsafe, so long as all unexposed persons are unprotected by vaccination

French Sanitary Commissioner at Constantinople—Pursuant to a request from of the Ottoman Government M Chartemesse has been sent by the French Government to preside at the inauguration of the measures of combating the cholera which has been active in that city—*Bulletin Medical*, Sept 20

RUPTURE OF SMALL INTESTINE—LAPAROTOMY—ONE DEATH, TWO RECOVERIES

BY H C DALTON, M D
ST LOUIS
Professor Abdominal and Clinical Surgery, Marion Sims College of Medicine late Superintendent St Louis City Hospital

Rupture of the intestines is so rare that I am sure the report of the following cases will prove of sufficient interest to the Association to justify me in taking up a few moments of your time The cases particularly emphasize the urgent need of early interference in such injuries, if we would save our patients from rapid peritonitis and death

CASE I —RUPTURE OF JEJUNUM AND MESENTERY—LAPAROTOMY—DEATH

J W , æt 22 , laborer , entered the City Hospital in October, 1893 Twenty hours before admission, while stealing a ride on a freight train in Illinois, he fell from the top of the car striking his belly against the handrail in the descent He was brought to the hospital at 1 P M next day His temperature at that time was 103 F Pulse 120 F Percussion gave dullness in the dorsal gutters, and resonance anteriorly He was at once prepared for laparotomy Dr H H Mudd, who was holding a clinic at the time, kindly assisted me in the operation After thorough antiseptic precautions a median incision eight inches long, was made The cavity was found full of clotted and fluid blood The necessary handling of the intestine caused fresh bleeding which was at first thought to come from the liver, but a careful search revealed a complete transverse laceration of the jejunum at its spinal attachment, the end of the gut being separated to the extent of an inch or more The mucous membrane was greatly everted The tear extended an inch into the mesentery and owing to the depth of the rupture it was manipulated with great difficulty The mesentery was closed on both sides with interrupted iron dyed silk sutures An ordinary cambric needle two inches in length was used The upper end of the gut was inserted into the lower and the serous surfaces brought together by the interrupted Lembert suture, a large number being required The blood was washed from the cavity and the surgical wound closed Drainage was not used The patient never rallied from the shock, and died a few hours after the operation I can but believe that this patient would have recovered had he been brought to the hospital the day before The intestine was quite red though not adherent, peritonitis not having advanced sufficiently far to produce that effect

CASE II —RUPTURE OF JEJUNUM—LAPAROTOMY—RECOVERY

John I , æt 17, hostler, entered the City Hospital at 9 A M Feb 8, 1892, a half hour after being thrown from a horse The horse also fell and rolled over on the boy, boring the horn of the saddle into his belly A scalp wound four inches in length was found three inches above the left ear from which a considerable quantity of blood had escaped, sufficient to thoroughly saturate the patient's clothes Although the patient admitted shortly after admission that he was suffering considerable pain in the abdomen, he afterwards denied it, referring all the pain to the scalp wound I learned later that a patient in an adjoining bed had warned him that if he admitted having pain in the belly the doctors would "cut him open " Five or six hours after admission he reluctantly gave me the above history Careful inspection of the abdominal surface failed to show the least bruise or abrasion, but deep pressure gave pain in the umbilical region, and percussion gave dullness over the left side of the belly There had been considerable vomiting His pulse was now 105 F , temperature 101 8 F

The scalp wound had been cleaned and closed shortly after his entrance into the hospital After thorough antiseptic precautions a medial incision five inches long was made The small intestine was found collapsed This was followed to the upper portion of the jejunum where a transverse rupture an inch and a quarter in length was found Considerable blood and fecal matter was found in the left dorsal gutter This was washed out with warm physiological salt solution The wound in the gut was closed by interrupted iron dyed silk Lembert suture A glass drainage tube, surrounded by iodoform gauze, was placed in the pelvic cavity and the belly closed The tube was cleaned every hour for twelve hours Then at increased intervals for four hours, after which it was removed

The patient rallied nicely His temperature for four days varied between 100 F and 101 F , after which recovery was rapid

At the time of the removal of the tube, an accident occurred which had happened in several of my previous cases, i e , portions of the omentum had become strongly attached to the openings in the tube I found it impossible to detach the omentum until I had excised the invaginated portion The fistulous track left by the tube was filled with iodoform gauze, and a snug dressing applied The patient was discharged well March 20, twelve days after admission

CASE III —RUPTURE OF ILEUM—LAPAROTOMY—RECOVERY

Peter M , æt 20, was admitted into the hospital at 4 P M , Nov 20, 1891 Three hours prior to admission, while feeding a circular saw a piece of wood became detached, and with great force was thrown against his abdomen In a few minutes he grew faint and was compelled to lie down Vomiting soon developed, and pain became intense When admitted to the hospital he was in great pain paroxysmal in character Shortly after this he again vomited His pulse was 116 F and weak , hands and feet cold The face wore an anxious expression The respiration was hurried and superficial Examination of the belly showed a very slight abrasion four inches in length, extending from right anterior superior spinous process to umbilicus Percussion over this region gave a tympanitic note There was also some swelling at this site, as well as great tenderness and pain on pressure The urine was drawn and found normal, indicating an intact bladder His rectal temperature was 105 F

At 7 30 P M , three and one-half hours after admission, I opened the belly Prior to doing this, however, I had in the presence of Drs French and L I Mathews (who were visiting me at the time), made the diagnosis of ruptured intestine An incision four inches long was made in the right linea semilunaris which bisected the abraded portion about its middle Upon drawing out the ileum a transverse rupture about an inch long was found This was closed by five or six interrupted Lembert iron dyed sutures The omentum was also stitched to the wound A small quantity of fecal matter and a large quantity of peritoneal secretion was sponged from the cavity, after which it was closed without drainage, save a small piece of gauze which was left in the lower angle of the wound This was removed on the second day with great difficulty owing to the firm adhesion of the gauze Peritonitis had not developed

There was some contusion and hematoma in the adjoining mesentery The cavity was not irrigated, but the intestinal coils, while out of the belly, were washed with the salt solution As in the preceding case, the small intestine below the rupture was collapsed (This condition is almost always present in such cases as well as in intestinal obstruction)

(An interesting feature of this case was that a Meckel's diverticulum was found a short distance below the rupture It was an inch in length and about the same in width) The wound healed by first intention and the patient's recovery was rapid and uninterrupted Flatus and feces passed for the first time on the second day

I attribute the success in the last two cases to the early operation I believe, in the hands of a careful surgeon, almost all such cases can be saved Of course the main point is to make a correct diagnosis The symptoms following the injuries to the abdominal viscera are usually sufficiently plain I lay most stress upon the character of the pain It is usually intense and paroxysmal in character It is nearly always accompanied by vomiting

Blows upon the abdominal wall, unaccompanied by rupture of the viscera rarely give rise to such grave symptoms Usually a soothing application and rest will give relief If in spite of this simple treatment severe paroxysmal pain continues for some hours we may be sure, almost beyond doubt, that we have to deal with a grave condition for which laparotomy affords the only relief

Should the injury cause internal hemorrhage, percussion of the dorsal gutters will give dullness and thus make the diagnosis more certain Many such cases are lost by the so-called conservative surgeon waiting for symptoms of peritonitis Symptoms of peritonitis mean peritonitis and the operation is then in the vast majority of cases, followed by the usual result—death

After such injuries the patient should be carefully watched for a few hours, and a few hours only For my part I would rather make a mistake and operate immediately than to fail to operate in a single appropriate case For in the inappropriate cases, a simple exploratory operation would rarely result in death, and would add but little to the gravity of the case, while delay in appropriate cases would almost certainly result in death

I do not deny that blows on the abdomen may give rise to the described grave symptoms without visceral injury, but I do emphatically deny that such symptoms will continue for hours after the injury I am also not unmindful of the fact that in grave visceral injuries patients have recovered without surgical interference, but I desire to ask the procrastinating surgeon how many he thinks would recover without such aid,—how many such cases he has seen? Should he tell of such cases I would be glad to ask him if he was sure his diagnosis was correct, and to give us the reason for his faith

Cases of rupture of the liver and spleen are very much more liable to recover without surgical aid than rupture of the intestine or bladder In cases of the former kind, (i e, of the liver and spleen) unaccompanied by evidences of hemorrhage, an operation might be delayed many hours In such cases the surgeon should not hesitate to operate as soon as he is well satisfied that the expectant plan will fail, and this means that he should do it before the development of peritonitis

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NECROLOGY

Dr Clarke of San Francisco, died Sept 14, 1893

Dr George G Shively of Waynesboro, died Sept 20, 1893

Dr J E Roche of Chicago, died Sept 29, 1893 The doctor's life was lost by an accident His horse ran away and the vehicle upset, throwing him into the river His body was not recovered for several days

Dr Walter Vought of New York City, died of typhoid fever September 24 He was a native of Buffalo, N Y, and educated at Yale College, Columbia University, at Heidelberg and Vienna He made nervous diseases the subject of special study, and was chief of clinic in that branch at the Vanderbilt Clinic He was a member of the New York Academy of Medicine, Pathological and other scientific societies In the summer of 1892, his name became a household word by reason of his having been appointed to the charge of the Fire Island station for cholera suspects He was 31 years old at the time of his decease

BOOK NOTICES

A Dictionary of Medical Science—Containing a full explanation of the various subjects and terms of anatomy, physiology, medical chemistry, pharmacy, pharmacology, therapeutics, medicine, hygiene, dietetics, pathology, surgery, bacteriology, ophthalmology, otology, laryngology, dermatology, gynecology, obstetrics, pediatrics, medical jurisprudence and dentistry, etc, etc By Robley Dunglison, M D LL D, late Professor of Institutes of Medicine in the Jefferson Medical College of Philadelphia Edited by Richard J Dunglison, A M, M D New (21st) edition, thoroughly revised, greatly enlarged and improved, with the pronunciation, accentuation and derivation of the terms In one imperial octavo volume of 1,181 pages Cloth, $7 00, leather, $8 00 Philadelphia Lea Brothers & Co, 1893

In a recent issue we announced the early publication of the new edition of this great work and favorite American dictionary

It now lies upon our table, and in examining it we are pleased to note, that all the old features that have made Dunglison's Dictionary so popular in the past have been retained Many new improvements have been made, to bring the work up to date No previous edition has witnessed so many additions and changes, in which the editor has apparently been greatly aided by the many dictionaries that have appeared since the last edition was issued

A perusal of the book will convince any one, that the "Dunglison" will still retain its well earned place in the medical library for a long time to come, as a monument to American scholarship

Bellevue Hospital and Its Internes—A presentation copy of this interesting book, "An Account of Bellevue Hospital, with a Catalogue of the Medical and Surgical Staff from 1736 to 1894," is before us It is from the De Vinne press, and faultless in its typographical dress It is abundantly illustrated, and attractive beyond anything of a medico-historical nature that has hitherto fallen under our notice About one-fourth of its letter-press is given up to the history of the hospital and about three-fourths are needed for the catalogue The latter part is that which must necessarily have entailed the laborious efforts of the editor Dr Robert J Carlisle, to gather together the records of a thousand or more names of practitioners who have gone forth from Bellevue's wards to the four corners of the earth Dr Carlisle has done his work patiently and fully, and he is to be congratulated if he has survived his labors and has his health A number of good portraits adorn the book, among the best of which are the faces of the late Drs Alonzo Clark and Henry B Sands The book is published under the auspices of the Society of the Alumni of the Hospital which may be addressed at No 5, West Fifty-eighth Street, New York City

Alabama State Medical Association—Transactions for 1893. The transactions of this Association appears in its usual well written form, contains some excellent papers but, above all, shows the most careful organization of probably any State society in the United States The report of the board of censors, annually published by this Association is unique It includes the reports of the examinations made by each county board of censors of candidates for admission to practice, with the comment of the censors thereon, a roll of county societies, the annual oration and various interesting papers The book is highly creditable to the Association and the publication committee The secretary is Dr Jas R Jordan of Montgomery, Ala

New York State Medical Association—Transactions for 1892 By all odds the most complete and comprehensive transactions that have reached our table thus far, are the transactions of this Association, comprised in a handsome volume of 834 pages It has been carefully edited for the Association by Dr O C Ludlow of New York The papers include the following "President's Annual Address," by Dr Judson B Andrews of Erie County "Pneumotomy for Relief of Tubercular Abscess and Gangrene of the Lung, Twice on the Same Patient," by Dr John Blake White of New York County "Traumatic Osteo-Arthritic Lesions which Involve the Proximal Segment of the Ankle Joint, Their Pathological Anatomy and Treatment," by Dr Thomas H Manley of New York County "Muscular Traction for Hip Joint Disease," by Dr Thomas M Ludlow Chrystie of New York County "Some Recent Cases of Appendicitis," by Dr Nathan Jacobson of Onondaga County "Ectopic Pregnancy," by Dr Henry D Ingraham of Erie County "Antiseptic Vaginal and Intra-Uterine Injections Unnecessary, if not Injurious, in the Daily Practice of Obstetrics," by Dr Darwin Colvin of Wayne County "The Palliative Treatment of Such Cases of Cancer of the Uterus and Its Adnexa as are not Amenable to Radical Operative Measures," by Dr J E Janvrin of New York County "A Case of Puerperal Eclampsia at the Seventh Month, With a Few Thoughts from Practical Experience as to Treatment," by Dr Douglas Ayres of Montgomery County "Tumors of the Orbit A Detailed Account of Nineteen Cases Illustrating the Paper on the Same Subject Presented to the New York State Medical Association at Its Meeting in 1891," by Dr Charles Stedman Bull of New York County "Paraplegia," by Dr Charles W Brown of Washington, D C "The Question of Maternal Impressions," by Dr H S Williams of New York County "Clinical Contributions to the Subject of Brain Surgery," by Dr Roswell Park of Erie County "A Plea for the Early Extirpation of Tumors," by Dr John W S Gouley of New York County "Remarks on a New Method of Intestinal Anastomosis," by Dr Benjamin M Ricketts of Cincinnati, Ohio "A Report of Some Cases of Compound Depressed Fracture of the Skull," by George D Kahlo of Indiana "The Achievements of American Surgery," by Dr Frederic S Dennis of New York County "Memoranda, Practical and Suggestive," by Dr H D Didama of Onondaga County "Acute Pleurisy," by Dr Frank S Parsons of Northampton, Mass "A Clinico-Pathological Study of Injuries of the Head, With Special Reference to Lesions of the Brain Substance," by Dr Charles Phelps of New York County " The Etiology of Gastric Ulcer," by Dr Charles G Stockton of Erie County "The Examination and Commitment of the Public Insane in New York City," by Dr Matthew D Field of New York County "Mitral Stenosis in Pregnancy," by Dr Zera J Lusk of Wyoming County "The Use of Electricity in Midwifery," by Dr Ogden C Ludlow of New York County "The Rôle of Microbes in Disease," by Dr N B Sizer of Kings County Abdominal Hysterectomy for Myoma," by Dr Frederick A Baldwin of New York County 'Extraction of Steel from the Interior of the Eye with the Electro Magnet," by Dr Alvin A Hubbell of Erie County 'The Mental Symptoms of Fatigue," by Dr Edward Cowels of Somerville, Mass "A Review of Some Injuries of the Upper Extremity," by Dr E M Moore of Monroe County "Fractures of the Patella Treated by Continuous Extension, Patients not Confined to Bed" by Dr Josehh D Bryant of New York County 'Winter Cholera in Poughkeepsie," by Dr James G Porteous of Dutchess County 'Suggestions Relating to Improvement of Quarantine," by Dr Stephen Smith of New York County "The Limit of Responsibility in the Insane," by Dr John Shrady of New York County "Some Personal Observations and Reflections upon Alcoholism, the Effects of Alcoholic Abuse upon Posterity, and the Treatment of Alcoholism" by Dr H Ernst Schmid of Westchester County "Climatology in Its Relation to Disease," by Dr S J Murray of New York County "Pelvic Version," by T J McGillicuddy of New York County "Should We Treat Fever," by Dr S T Armstrong of New York County "Brief Comments on Materia Medica, Pharmacy and Therapeutics of the Year Ending November 1, 1892," by Dr E H Squibb of Kings County "Dermic and Hypodermic Therapeutics," by Dr S. F Rogers of Rensselaer County "Some Recent Experience in Renal Surgery, by Dr E D Ferguson of Rensselaer County "The Treatment of Neglected Cases of Rotary Lateral Curvature of the Spine," by Dr Reginald H Sayre of New York County

The Necrology Record includes memoirs of the following deceased Fellows Drs Abram Du Bois, M Calvin West, Myron N Babcock, Lucien Damainville, Nathaniel Clark Husted, James Ferguson and William Chace

The Association is to be congratulated on this magnificent volume It is apparent to the most superficial observer that the organization of the Association nine years ago by those who adhere to the regulations of the American Medical Association have well performed their part E D Ferguson, M D of Troy, N Y is the secretary

Pennsylvania State Medical Society—Transactions for 1893. The transactions of this Society are comprised in a handsome volume of 288 pages, containing the minutes, the annual oration and the papers read at the meeting The volume contains papers by such well known authorities as Price, Shoemaker, Roberts, Tyson, Dixon and Mills Several of the papers are handsomely illustrated, and the book is well printed Wm B Atkinson, M D of Philadelphia is secretary

DOMESTIC CORRESPONDENCE

Antisepsis as She is Taught

Cleanliness is next to godliness

To the Editor—Some of the requirements of modern antisepsis, "such as shaving the pubes, sealing vagina and anus, and banishing paterfamilias, ante partum" must impress the veteran obstetrician much as the swallow tail coat and standing collar did an untutored savage in process of civilization Delighted and tractable he was until he came to put on these articles of apparel, when suddenly disrobing he resumed his war paint and feathers and with a "whoop" disappeared in the bush C M Fenn, M D

San Diego, Sept 18, 1893

MISCELLANY

The Health of the British Army—The report of the British Army Medical Department for the year 1891 has recently been issued The delay in its appearance is allowable when it is considered that reports have to come in from all parts of the world before the consolidation in the office of the director general can be made In turning over its pages the tabulated statistics naturally attract our attention first, and we are gratified to find that in the presentation of our own army medical statistics our military brethren are in no ways behind those of her Majesty's service We observe that the latter purport to give the rating of sickness under certain specified conditions of disease for the year and the average ratios for the previous ten years, but as a matter of fact the average ratios are given only for the years 1886-90, and a note at the bottom of each page of the tabulations announces that "the average ratios for ten years will be given in future years The average ratios for the six years, 1886 to 1891, will be given in the report for 1892, those for the seven years, 1886 to 1892, in that for 1893, etc" The reports of the surgeon general of the United States army for several years back have given the ratios for the preceding decade that the value of the ratios for the year reported may be appreciated the more readily. Again, the tables of the United States reports give the data for a larger number of specified diseases than are found in that now before us By way of illustration, the latter furnishes us with the rates for diseases of the respiratory system in gross, while the former specifies the rates of catarrhs and common colds, bronchitis, pneumonia, pulmonary phthisis and pleurisy, and bundles up by themselves only the remaining unspecified diseases of this system. Similarly, our tables give much more information as to the prevalence and severity of wounds, accidents and injuries.

The strength of the British army was in round numbers 200,000 men, half of these men were on the home stations, and two-thirds of the other half in India. Malta and Gibraltar were the largest of what may be called the small military settlements the former with nearly 8,000 and the latter with 5,000 men. Canada had only 1,500.

The admissions on sick report of the home service troops amounted to 772.2 per thousand of strength. This seems to intimate that there was much less sickness among these men than in our army during the same period, for our admission rate was 1364.78 per thousand, but notwithstanding their relatively small number of cases our British friends had 41.66 men constantly sick while we had only 42.01. The average duration of each case was with them 19.69 days, with us 11.2 days. It is seen, therefore, that the admission rate means little. Our medical officers place men on sick report for trivial disorders that do not meet with official recognition in the British army. The non-efficient rate, based on the number constantly sick, is the proper rate for measuring the relative amount of sickness in different armies, and as these rates are 41.66 and 42.01, our disability during the year must be regarded as practically the same as theirs, notwithstanding their smaller number of cases. Their death rate was 4.94, ours 8.05, but the latter includes the men who were killed in the Sioux campaign. Their rate of discharge for disability was 14.51, ours 17.23.

When we consider that the 100,000 men who furnished these statistics were stationed on what in this country would be called fancy duty, we have reason to be gratified with the comparison, for many of our men during the year were exposed to all the discomforts and insanitary conditions incident to a state of war. When the British troops on foreign stations are brought into the calculations the general death rate of their army rises to 9.13, and the constantly non effective from sickness to 55.86. Their heaviest death rate was reported from the Mauritius, 25.87, half of which was caused by enteric fever. India gave 16.36, the main factors enteric fever and cholera, and the West Indies 13.69, in part due to yellow fever. The highest non-effective rate was given by the troops in the Straits settlements, 93.48, more than half of it the result of venereal diseases. India had 80.22 constantly sick and the West Indies 75.53.

But it is with the record of the home service troops that we are chiefly interested, as permitting us to compare the morbility among our own troops with that of men who are stationed in a healthy climate and have the best medical and sanitary care. Enteric fever caused only 1.1 admissions per thousand of strength, as compared with 3.95 in the United States, but in considering these rates it is to be remembered that a large number of other continued fevers were reported in the United Kingdom many of which would probably have been called typhoid fever in this country. As in previous years, the station at which there were most cases of enteric fever was Dublin. Influenza prevailed as much in Britain as in the United States. Although the opinion is generally entertained in this country that drainage and efficient cultivation have banished malarial fevers from the British Isles, we find that there were 1.8 admissions in Scotland, 3.0 in Ireland and 9.6 in England and Wales. The greatest prevalence in the United States was 546.05 in Oklahoma, but the average of the army was only 62.63. If the sickness from all forms of venereal disease is taken together the British admission rate amounted to 197.4, and the constant sick to 15.34. Our figures compare favorably with these, only 72.46 admissions and 5.00 non-efficient, but if all our garrisons were in the neighborhood of cities, as are most of the English stations, it is possible our rates might be as high as theirs, for their highest admission rate, 280.0, in the Channel Islands, was nearly equaled by our recruits at Columbus Barracks, Ohio, who had a rate of 266.66. It is alcoholism, however, that must be regarded as the special vice of our troops when compared with the British if any faith may be placed in the statistics. Only 2.4 admission were recorded, while the United States rate was 40.01. We know that our men go on sick report when they are suffering from the effects of dissipation, but the figures fail to give us any idea of how this may be in the English ranks. We have recognized already that their trivial cases are not taken on the sick report, and a little cerebral congestion or gastric irritability due to the conviviality of the evening before may be regarded as one of the trivial cases. The admission rate for injuries was 105.1 and the mortality .70, as compared with 248.91 and 3.02 in the United States. They had a total of 19 deaths from gunshot wounds in their 100,000 men, we had 87 among our 25,000, they had 27 deaths from drowning, we 18, they 25 suicides, we 22, all of which seems to indicate that on home service Tommy Atkins has a quieter and easier life than he would have if he emigrated and took service under the stars and stripes. Out of a total of 35,678 operations of vaccination of soldiers 68·31 per cent gave perfect results, 18.87 per cent gave modified results, 12.82 were failures.

Of 6,132 recruits inspected 37.88 per cent were rejected. We are more exacting in our requirements, for of 25,050 candidates we rejected 63.84 per cent. The average British recruit is young and undeveloped, age 19.6 years, height 65.6 inches, weight 122.3 pounds, and chest measurement 33.4 inches. On account of our short term of enlistment and the inclusion of our reenlisted soldiers in the list of accepted men, our average recruit is a much better man. Age 24.43, height 67.43 inches, weight 145.35 pounds, circumference of chest at expiration 34.16 inches, at inspiration 37.02 inches.

In the appendix to the Report Brigade, Surgeon Lieut.-Colonel J. Lane Notter reviews the progress of hygiene for the year 1892. He speaks highly of the work of the Massachusetts Board of Health, and cites from a paper by Mr. Fuller on the differentiation of the bacillus of typhoid fever in water. The method of Dr. Theobald Smith for distinguishing the typhoid bacillus is also given. Special note is made of the efforts in France to reduce the prevalence of enteric fever in the army by the substitution of pure for polluted water, or in default of this, by subjecting the impure water to a filtering process by the Chamberland filter. Wherever an epidemic broke out the water supply was found to be contaminated. In 1867 the enteric fever cases numbered 6,881, since then they have been reduced 52 per cent. The filter is composed of Chamberland bougies, system Pasteur, placed in concentric circles in the inside of a metallic reservoir capable of receiving water under a pressure of three atmospheres. For a company of infantry a filter of twelve bougies is allowed, with a reservoir having a capacity of 150 liters. The officers of the medical department are responsible for the proper working of the filters.

Epidemic of Typhoid in Allegheny, Pa.—An epidemic of typhoid fever has broken out in lower Allegheny and invaded the Western Penitentiary. Two deaths in two days occurred in the prison. Eighteen other prisoners are in the hospital suffering with the disease and some may not recover. Outside the prison there are scores of cases. The drinking water pumped from the Allegheny River is given as the cause of the epidemic.

New Hospital at Kansas City.—The University Medical College of Kansas City, have leased All Saints' Hospital, and organized a new staff. Dr. B. E. Fryer is President of the Board of Managers.

The New City Hospital at Minneapolis was opened for occupancy October 1.

Health of New York —During the month ending September 30, the lowest mortality thus far of the year 1893 was reached in the city of New York The total number of deaths reported was 678, which is 53 below the average of the corresponding weeks of the past five years, and represents an annual death rate of only 18 54 for each thousand of the estimated population Notwithstanding the generally improved condition of the health of the city, however, there was an increase of seven over the previous week in the number of deaths from smallpox, which amounted to ten On account of the increase in this disease the health department is making use of extraordinary precautions, and has just secured from the Board of Estimate and Apportionment the appropriation of $3,000 for the payment of fifteen extra physicians to serve in the free vaccinating corps Dr Nagle, registrar of records of vital statistics, reports that epidemic influenza has again made its appearance in the city, a month earlier than last year During the week two deaths were recorded as due to this cause, and they are the first reported from la grippe since the week ending July 1, when there were also two fatal cases Last year the first death from it was reported October 29, and up to the close of the year the deaths amounted to twenty From January 1 to July 1 there were 182 deaths During the week there were thirteen deaths from typhoid fever, two from scarlet fever, twenty-three from diphtheria, four from cerebro spinal meningitis and eight from measles

A Simplified Formula for a Much Litigated Article —A nostrum that has been much in the papers and much in the courts, and is nevertheless still doing a considerable business, it is said, is the subject of an exposure in the *Druggists' Circular and Chemical Gazette* The object of the article is to present a prescription which, while not coming in conflict with the patent rights of any microbe destroyer, will have all the desired or desirable potency It has been declared by Dr Eccles of Brooklyn, in the journal above named, that the Radam's Microbe Killer contains sulphuric acid for its main support in the realm of germ-slaying The prescription, simplified from the analyses of Eccles and others, reads as follows

Sulphurous acid, U S P, four ounces, sulphuric acid, commercial, four drachms, muriatic acid, two to ten drops, red wine, one ounce, water, sufficient to make one gallon

In former analyses, the muriatic acid had been found in larger proportions That was "one of the best of the ingredients," as Dr Eccles reported in 1889, whereas now it is almost eliminated and sulphurous acid has taken its place Dr Eccles states later that he is informed that the formula used by the Canadian branch excludes the red wine, one ounce to the gallon

Pigmentation Treated by Tattooing —According to Dr Paschkis, in the *Archiv für Dermatologie and Syphilis*, Heft 3, 1893, tattooing may be made use of in the relief of pigmentations of the skin The material chiefly used by him has been baryta-white, which latter may be toned to the color of the surrounding integument by a judicious admixture of browns and reds A little experience, with a good eye for color, will bring about a considerable improvement of the unsightly parts

Dr Ohmann-Dumesnil of St Louis, has shown that tattooing may be removed by tattooing His method involves a new principle, namely, the digestion of the subcutaneous pigments by papoid The tattooed parts having been well washed with soap and water, a bunch of cambric needles—six or eight—bound together with silk thread is used This medical tattooing implement is dipped in glycerol of papoid, and driven with a sharp blow into the tattooed part This is repeated over the entire stain, and must be thorough to be effective A peculiarity about this method is that it causes no inflammatory reaction observed in tattooing with Indian ink or other pigments Dr Ohmann-Dumesnil considers that the digestive principle of the papoid is disseminated about the deposit of pigment thus liberating it A portion is absorbed, in a finely divided state, by the lymphatics, another part probably finds its way into the upper layers of the epidermis and thence to the surface, and in this manner the pigment disappears

Elected Mayor of Woodward —Dr Melton of Denver, Colo, was one of the "boomers" that went to the Cherokee strip, and when the land was thrown open to settlement and the people had selected their locations and erected their tents a municipal government was organized by the election of Dr Melton of Denver, as mayor, Attorney Laune of Denver, city attorney, and a board of aldermen consisting of five members, three from Denver, and two from Texas On Sunday two services were held, and Woodward has started on its career with as good and even better prospects than any settlement in the strip Following precedent, a new medical society and medical journal will doubtless soon be added to the attractions of the infant city

The Anti-Rheumatic Ring —A writer in *Science Siftings* says that two thousand years ago the Greeks believed that there was virtue in finger rings as against rheumatism Galen, in the second century, gave heed to some of the popular fancies of that day, and recommended a ring of jasper with an intaglio of a male figure wearing about his neck a bunch of herbs Marcellus, in the time of Marcus Aurelius, prescribed a ring of pure gold, with certain Greek letters inscribed thereon, to be worn for pain in the side, the circlet was directed to be worn on the side opposite to the pain The decrease of the moon was propitious to the plan of cure "And these rings," says the writer, "had quite as much medical value as those that are now being sold for the relief of rheumatism"

Bequests to New York Hospitals —The will of the late Hon Hamilton Fish provides that St Luke's Hospital shall receive $5,000, and the Bellevue Training School for Nurses $2,000 These are gifts additional to former ones made during the lifetime of the donor

Fatality Following the Administration of Chloroform —A death after chloroform occurred at the Methodist Episcopal Hospital at Brooklyn, N Y The patient, an adult male, had been brought to the hospital for the reduction of a dislocation of the arm, due to a fall from a wagon Full anesthesia had not been induced before syncope set in, which could not be removed by the restoratives used

Examinations of Manitoba University Medical Department —The program of examinations is as follows

Wednesday, Sept 20—9-12 A M Algebra, med entrance and previous supp

2-5 P M Canadian hist and geog, med entrance and previous supp chemistry

Thursday, Sept 21—Euclid, med entrance and previous supp

2-5 P M Arithmetic, med ent and Latin, prev supp

Friday, Sept 22—9-12 A M Physics, med ent, trig, prev and pass

2-5 P M Latin, Virgil, med ent, French, previous statics, pass

Saturday, Sept 23—9-12 A M Latin, Cæsar, med ent

2-5 P M Botany, med ent

Monday, Sept 25—9-12 A M Grammar and rhetoric, 1½; composition, 1½

2-5 P M Optional subject, poetical literature

Dr J L Wilcox of Springfield, Ill, has been recently appointed Collector of Internal Revenue for the Pekin district

A Cottage Hospital is to be built at Woodstock, Ont, at a cost of $10,250

THE PUBLIC SERVICES

HEADQUARTERS OF THE ARMY, ADJUTANT GENERAL'S OFFICE
WASHINGTON, September 22, 1893

GENERAL ORDERS, No 78

By direction of the Secretary of War, upon the recommendation of the Surgeon General of the Army, the faculty of the Army Medical School, established by General Orders, No 51, June 24, 1893, from this office and regulations for the government of the school are announced as follows

FACULTY OF THE ARMY MEDICAL SCHOOL

Colonel Charles H Alden, assistant surgeon general U S Army, president of the faculty, and lecturer on the duties of medical officers

Lieutenant Colonel William H Forwood, deputy surgeon general, U S Army, professor of military surgery

Major John S Billings, surgeon, U S Army, professor of military hygiene

Major Charles Smart, surgeon, U S Army professor of military medicine and director of the chemical laboratory

Captain Walter Reed, assistant surgeon, U S Army, professor of clinical and sanitary microscopy and director of the pathological laboratory

Captain Julian M Cabell assistant surgeon U S Army, assistant to professor of military surgery and instructor in Hospital Corps drill

THE COURSE OF INSTRUCTION

“The course of instruction will be for four months, and will be given annually at the Army Medical Museum, in Wasihngton City, commencing *on the 1st day of November*” *It will include lectures on and practical instruction in*—

1 The duties of medical officers in war and peace

2 Military surgery, the care of the wounded in time of war, and hospital administration

3 Military hygiene

4 Military medicine

5 Microscopy sanitary and clinical pathological histology, bacteriology, and urinology

6 Hospital Corps drill, and first aid to wounded

By permission of the Surgeon General medical officers of the Army who desire to avail themselves of the course of instruction, and who are stationed in or near the city of Washington or who have a leave of absence which enables them to attend the course may be admitted as pupils under the same regulations as apply to recently “approved candidates for admission to the Medical Corps of the Army”

EXAMINATIONS

At the termination of the course of instruction the “approved candidates for admission to the Medical Corps of the Army” will be examined *by the several professors, and their relative proficiency in each* branch will be reported by the president of the faculty to the Secretary of War through the Surgeon General of the Army

REGULATIONS

1 The president of the faculty will be responsible for the discipline of the school

2 The junior professor will act as secretary and will be responsible for all property pertaining to the school

3 A faculty meeting will be held in the office of the secretary on the first Monday of each month from October to March, inclusive, and whenever called by the president of the faculty or the Surgeon General of the Army

4 Resolutions adopted by the faculty relating to the course of instruction the purchase of books and instruments etc, will be submitted to the Surgeon General of the Army for his approval

5 The president of the faculty will submit to the Surgeon General of the Army, on or before the 1st day of April of each year a detailed report of the condition of the Army Medical School including an account of the instruction given and the proficiency of the several pupils as shown by an examination made by each professor at the termination of his course

6 The hours of instruction will be from 9 to 12 A M and from 1 to 4 P M, daily, from November 1 to February 28 inclusive, with the exception of Saturdays, Sundays legal holidays, and the week commencing December 25

7 Pupils will be required to be present during the hours designated unless specially excused by the president of the faculty or by orders from the War Department

8 When necessarily absent on account of sickness or other emergency, pupils will as soon as practicable send a written statement to the secretary of the faculty, explaining the reason for such absence

9 The laboratories and library of the Army Medical School will be open for the use of pupils during the hours of instruction designated

10 Pupils will be held strictly accountable for all instruments and apparatus issued to them for their personal use during the course of instruction, and for any loss or injury to books or apparatus belonging to the Army Medical School, when such loss or injury is due to carelessness or neglect

11 Pupils in the Army Medical School during the hours of instruction, will wear the undress uniform of the grade to which they belong, except when engaged in laboratory work, when a black cambric laboratory gown may be worn

By command of Major General Schofield

R WILLIAMS, *Adjutant General*

Army Changes Official list of changes in the stations and duties of officers serving *in the Medical Department U S Army, from September* 23, 1893 to September 29 1893

Lieut Col FRANCIS L TOWN deputy Surgeon General U S A is granted leave of absence for four months on surgeon s certificate of disability By direction of the Secretary of War

First Lieut CHARLES F KIEFFER Asst Surgeon, is relieved from further duty at Ft Meade, S D, and from temporary duty at Ft Yellowstone, Wyo and will report to commanding officer at Ft Assiniboine, Mont for duty

First Lieut WM F LEWIS Asst Surgeon will, upon being relieved from duty at Ft Assiniboine Mont by Lieut KIEFFER, report to commanding officer, Ft Apache Ariz for duty

First Lieut BENJAMIN BROOKE Asst Surgeon will proceed at once from Ft Leavenworth Kan to Ft Brady Mich for temporary duty during the absence on leave of Asst Surgeon PAUL CLENDENIN, U S A

Capt PAUL CLENDENIN, Asst Surgeon U S A, is granted leave of absence for one month to take effect from the arrival of Asst Surgeon BENJAMIN BROOKE

Marine Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for *the six weeks ended September 16, 1893*

Surgeon R D MURRAY, to proceed to Pensacola, Fla for temporary duty, August 10 1893 To rejoin station, August 18, 1893 To proceed to Brunswick, Ga, for temporary duty, September 14 1893

Surgeon P H BAILHACHE to assume charge of inspection of immigrants, August 14, 1893 Detailed as chairman of board for physical examination of keepers of life saving stations August 18 1893 Relieved from duty as inspector of immigrants, August 22 1893 Detailed as chairman of board for physical examination of officers Revenue Marine Service, September 12, 1893

Surgeon GEORGE PURVIANCE, to report at Bureau for temporary duty August 6 and 10 1893 Detailed as chairman of board for physical examination of Surgeon JOHN VANSANT August 28 1893

Surgeon JOHN VANSANT, ordered before board for physical examination, August 31 1893

Surgeon W H H HUTTON, to report at Brunswick August 10, 1893 To proceed to Cape Charles Quarantine as inspector, August 12 1893 To proceed to Brunswick, Ga for temporary duty, August 12 1893 To rejoin station, Detroit, Mich, September 10, 1893

Surgeon JOHN B HAMILTON granted leave of absence for four days, August 16, 1893 Granted leave of absence for ten days, August 29, 1893

Surgeon H W SAWTELLE, detailed as member of board for physical examination of life saving stations, August 18, 1893 Detailed as member of board for physical examination of P A Surgeon H T GOODWIN, August 22 1893 Detailed as member of board for physical examination of officers Revenue Marine Service September 12, 1893

Surgeon H W AUSTIN detailed as recorder of board for physical examination of Surgeon JOHN VANSANT August 28, 1893 To represent the Service at meeting of Pan American Medical Congress, September 5, 1893

Surgeon J M GASSAWAY, to inspect local quarantine at Pascagoula, Miss, August 23 1893

Surgeon F W MEAD, to proceed to Chicago, Ill, for temporary duty, August 9 1893

Surgeon H R CARTER, to proceed to Fernandina Fla, to inspect quarantine, and return to Bureau August 7, 1893 To proceed to Pensacola, Fla August 10 1893 To proceed to Brunswick, Ga, for temporary duty, August 12 1893 To report at Bureau, August 21 1893 To represent the Service at Pan American Medical Congress, September 5, 1893 To proceed to Philadelphia, Pa and Reedy Island Quarantine, September 9, 1893 To proceed to Cape Charles Quarantine and assume command September 11, 1893 To report at Bureau for temporary duty September 13, 1893

Surgeon W A WHEELER detailed for duty at Camp Low, August 14, 1893 To rejoin station August 22 1893 Detailed as recorder of board for physical examination of P A Surgeon H T GOODWIN, August 22, 1893

P A Surgeon D A CARMICHAEL, granted leave of absence for thirty days, August 16, 1893

P A Surgeon C T PECKHAM, granted leave of absence for twenty days, August 10, 1893

P A Surgeon A H GLENNAN, to proceed to Reedy Island Quarantine for temporary duty, August 30 1893

P A Surgeon G M MAGRUDER, to proceed to Pensacola, Fla, as inspector August 10 1893 To proceed to Brunswick, Ga, for temporary duty August 23 1893 To proceed to Beaufort, S C, as inspector, September 9, 1893

P A Surgeon J J KINYOUN, detailed as inspector New York Quarantine August 12 1893 Detailed as member of board for physical examination of P A Surgeon H T GOODWIN August 26 1893

P A Surgeon H T GOODWIN, granted leave of absence for thirty days August 10 1893 To proceed to Louisville, Ky, for duty, August 15, 1893 Ordered to appear for examination as to physical condition, August 22, 1893

P A Surgeon G T VAUGHAN, to represent Service at meeting of Pan American Medical Congress September 5 1893

P A Surgeon H D GEDDINGS to report at Bureau for temporary duty, September 13, 1893 To proceed to Brunswick, Ga, for temporary duty as inspector September 15 1893

Asst Surgeon L E COFER, to proceed to Savannah Ga, for duty, August 25 1893

Asst Surgeon C E DECKER to proceed to San Francisco Quarantine for temporary duty September 3, 1893

Asst Surgeon J A NYDEGGER to proceed to Jersey City, N J, for temporary duty, September 2 1893 To rejoin station, September 9 1893

Asst Surgeon J H OAKLEY, to proceed to Quebec, Canada, for duty, August 26, 1893

Asst Surgeon SEATON NORMAN to proceed to New York City for temporary duty, August 18 1893 To rejoin station August 23 1893 To proceed to Jersey City for temporary duty, September 3, 1893 To rejoin station September 9 1893

Asst Surgeon E K SPRAGUE to proceed to Cairo, Ill, for temporary duty, August 26 1893

LETTERS RECEIVED

(**A**) Ayer N W & Son Philadelphia, Pa, Alma Sanitarium Co Alma, Mich Ashum G C, Cleveland O (**B**) Bane, Wm C Denver Col Breedlove J W Ft Smith Ark Berna, Henry St Louis Mo Bates J H Adv Agency New York N Y (**C**) Cone Andrew New York N Y (**D**) Daeuble, Louis, Allegheny Pa, Drevet Manf Co New York, N Y Dunlap, H M, Battle Creek, Mich Davis W E B Biermingham Ala Denison, Chas, Denver (**E**) Eastman Jas, Indianapolis, Ind (**G**) Gish Dr Jacksonville Mich Gapen Clark Kankakee Ill (**H**) Hills A K, New York, N Y Hamilton W D Columbus O Hopkins, F S, Thomasville Ga Hare H A Philadelphia Pa, Hibberd Jas F, Richmond Ind Hazlewood, A Grand Rapids Mich (**T**) Truax J C New York (**L**) La Garde L A, Chicago Ill, Lambert Phar Co St Louis, Mo (**M**) Mercer, A C Syracuse N Y, Mason L D, Brooklyn, N Y Murphy S H, Battle Creek, Mich Mettler L H Chicago, Ill Marshall Ptg Co Marshalltown Ia, Merrill N Gladbrook, Iowa (**N**) Niles S R N Adv Agency, Boston, Mass Norbury, F P Jacksonville, Ill (**P**) Parke Davis & Co, Detroit, Mich Philadelphia Policlinic, Philadelphia Pa Parkinson, J H, Sacramento, Cal Price, Joseph Philadelphia Pa (**S**) Shimonek F Milwaukee Wis Sanford, A N, San Francisco Cal, (**T**) Taylor H L New York N Y (**V**) Voldeng, N M Independence Iowa (**W**) White J A Richmond Va White M S So Omaha Neb Warner W R & Co Philadelphia Pa, Walker Pharmacal Co, St Louis Mo Wilson W G Shelbyville Ill Woolsey, F E, Plainwell, Mich Wilkinson, A D, Denison, Iowa Webb, J H Sheridan, Ind

The Journal of the
American Medical Association

VOL XXI CHICAGO, OCTOBER 14, 1893 No 16

ADDRESS

INTERNATIONAL CONGRESS OF PUBLIC HEALTH

ADDRESS OF THE PRESIDENT,[1]

SAMUEL H DURGIN, M D
BOSTON MASS
PRESIDENT OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

As co-workers in the field of sanitary science, and its practical application to the prevention of disease and death, we have again assembled from different parts of this and other countries to join hands, and to take counsel with each other.

We have met this time under most unusual circumstances, and with surroundings and conditions of world-wide interest

The Columbian exposition marks an era in the world's history Around us are gathered the evidences of advance in all lines of industry, of talent, and of thought There has been a peace congress, a congress of religion, a congress of charities and correction and innumerable other gatherings for the purpose of comparing notes and showing the great advance in our civilization in all lines of thought and endeavor

Among those who have died since the last meeting is Dr Edward H Janes, who for twenty-seven years occupied the position of Assistant Sanitary Superintendent of New York He was also Secretary of the American Public Health Association for two years

His contributions to the first three volumes of the Transactions, were characterized by care and painstaking, and of a decidedly practical character

He was much interested in his chosen work and was a modest, upright, conscientious man

Other workers have also passed away, and tributes to their memories will be paid by the Committee on Necrology

AMERICAN PUBLIC HEALTH ASSOCIATION

The great trust which this Association took upon itself twenty-one years ago has been worthily held, and the work to which it has addressed itself in the interest of humanity, has been diligently pursued It is fitting, perhaps, at this time, when we may be said to have attained our majority in years, to take a retrospective glance of public sanitation, and to note the possible results of its application in the relief of human distress The work of the sanitarian is manifold, and deals with the most vital of our personal and social interests It deals with the air we breathe, the food we eat, the water we drink, the soil we live upon, and with the general welfare of mankind It means the investigation of the rise, progress, and decline of epidemics, and a fostering growth of works and projects designed to prevent and remove the causes of disease

AIMS OF SANITARY SCIENCE

The sanitarian concerns himself but little with the cure of disease The problem which he seeks to solve is how disease can be averted The pathologist establishes the nature of morbid processes, and his investigations suggest to us the appropriate remedy The aim of the sanitarian is to seek out and remove the cause or causes which produced these processes It has been said that preventive medicine embraces everything which relates to the physical well being of our fellowmen, so that it has to deal with all physical evils and, incidentally, many of a moral character Its object is the health, and therefore the happiness and prosperity of man

It is sometimes objected that public hygiene can not lay claim to the possession of the qualities of an exact science, that its data are too partial, its generalizations too sweeping Unfortunately some reason for this feeling exists on account of the enthusiasm of certain writers who exaggerate what is seen, guess at what is unseen, and shape their conclusions accordingly

True sanitary science, however, is built up slowly by patient observation of facts Sanitary science is not altogether of modern growth It may be said to have experienced several revivals, but its real history is almost as ancient as history itself

HYGIENE AMONG THE ANCIENTS

The ancients fought against evil smells as vigorously as the moderns A process of disinfection was adopted by Ulysses, and described by Homer Hercules too, was a practical sanitarian, but of all the ancient sanitary reformers, Moses was the most thorough and practical He gave us the principle of the modern earth closet, although the animals of the field may be said to have anticipated him in that device During the best times of Greece and Rome, public sanitation was much studied, and the supervision of hygienic arrangements was an office of dignity among the Greeks and the Romans The cleansing and disinfection of streets and sewers were placed under a high officer of state, because as Justinian tells us "uncleansed and unrepaired sewers threaten a pestilential atmosphere, and are dangerous"

Sanitary science owes something to the fathers of medicine also Hippocrates was the first sanitarian who wrote an entire book on public health, and his discourses upon pure air, pure water and pure soil are instructive reading at the present day

It is exceedingly interesting and suggestive to find these ancient writers elucidating principles which the exact investigations of our time have demonstrated to be the true foundation of sanitary science

In Mexico it has been shown that sanitary science must have reached a high degree of perfection in its history Previous to the conquest of the country by the Spaniards, the towns were thoroughly and efficiently supplied with water by the most perfect system, but the teachings of these early times were not permanently effective The magnificent civil works were doomed to suffer ruin, and the world passed through dark ages of mental and physical barbarism

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[1] Read October 10 1893

The devastating epidemics of the middle ages which cut off one-quarter of the population of Europe are well known Filth, instead of being abhorred, was almost sanctified The monks imitated the filthy habits of the hermits and saints of early Christian times, and the early fathers commended them Even St Jerome used to praise the filthy habits of hermits, and especially commended an Egyptian hermit who combed his hair on Easter Sunday only, and never washed his clothes at all Monks up to the time of the reformation thought, or professed to think that, by antithesis, pollution of the body indicated cleanliness of the soul Practically, indeed, it might be said to have helped to it, because the odor of sanctity which infected these monks and hermits helped them to keep apart from the temptations of the world, for the world scarcely cared to come into too close contact with these odoriferous saints

MODERN SANITATION

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MUNICIPAL SANITATION

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He first pictures to himself an ideal sanitary condition, for example a clean, dry surface, a well-drained soil, good public and private sewerage, the immediate destruction or removal of all decomposable wastes, wholesome food and water supplies with a sufficient equipment to preserve all of these favorable conditions, and then his work of construction and maintenance begins

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WATER SUPPLY AND DRAINAGE

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Under these favorable conditions, the problem of the ventilation of sewers becomes extremely simple by harmless open grate covers over the manholes in the streets The public sewers thus supplied with the proper and continuous incline to secure the rapid and continuous flow, are ready to receive the private drainage from dwellings and factories and other sources

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It is easy to see that with such suitable provisions for the complete and rapid removal of all sewage, the escape of noxious emanations from the sewers into the streets and dwellings would be impossible

The conditions under which sewer gases are generated and penetrate into houses are from the stagnation of sewage, by its putrefaction when the consequent generation of poisonous vapors are favored, and the absence of sewer ventilation, by consequence of which these vapors are confined and pent up, until they acquire a sufficient degree of tension to force the barriers by which we vainly attempt to exclude them from our homes By the rapid removal of sewage, on the other hand, its putrefaction in our midst is forestalled, the generation of noxious gases within our drains and sewers is reduced to a minimum or wholly prevented The ventilation of sewers is rendered easy and harmless, and finally such air, gases and vapors as must be contained within the sewers, being no longer confined, find an easy escape into the open air

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In the city of Boston, where the principal part is sold to farmers, and the remainder carried out to sea, the cost of collection and transportation has reached the annual sum of one hundred and seventy thousand dollars, or considerably more than the entire appropriation for the health department, which includes the maintenance of harbor quarantine, free public baths and urinals, hospitals for contagious diseases, disinfection, public vaccination, the care of public burial grounds, the inspection of nuisances, and other incidental expenses This large cost can not be diminished by any of the present methods in use, but must necessarily be increased by the growth of population, by hauling to a greater distance, or by the process of cremation, which is now in use in many of our cities

It must be admitted that the storing of this material in our yards, and its subsequent transportation through our streets, creates a nuisance of a most disgusting character, and it seems to me it should not be looked upon by sanitarians as harmless, or as a satisfactory method of disposal, to say nothing of the enormous cost to the city

It has for many years seemed to me, that the kitchen wastes should, by some special provision in the kitchen stove, be disposed of as soon as they are formed By this means, all subsequent nuisance and expense would be avoided

The other wastes of the city which are now dumped into the harbor, and into other bodies of water, or upon vacant lots for filling, which are largely composed of combustible material, should undergo cremation, and their ashes used for filling tem, but the teachings of these early times were not permanently effective. The magnificent civil works were doomed to suffer ruin, and the world passed through dark ages of mental and physical barbarism.

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STREET ENGINEERING

The construction and care of our public and private streets have a sanitary side to be considered, especially when we remember the considerable proportion of the area of our cities which they occupy, and the frequent unsanitary condition in which we find them While the construction of streets is almost purely a matter for the engineer, the health officer has frequent cause to complain of their filthy condition Most streets in all cities present a more or less unclean and offensive surface This condition may be due to a faulty pavement, want of pavement, or a lack of care, which is supported by a popular notion that an unclean and muddy condition of the streets has no appreciable effect upon the public health Macadamized streets where much used, are unclean and offensive most of the time

It would be in the interest of the public health, a cleaner atmosphere, greater public convenience and economy, if all of the much used streets of our cities were paved with material which would present an even, durable and non-absorbent surface

The private alleyways are not only disowned, but generally uncared for by the city For the most part they are found to be unpaved, uncleaned, and a source of much complaint Any attempt on the part of the health officer to cause these places to be cleansed by the abuttors is attended with great difficulty, delay and frequent disappointment It would be far better to place these private ways in charge of the city, and tax the people for properly paving and keeping them clean

MORTALITY STATISTICS

Under the head of *mortality statistics*, the health officer finds a valuable guide to important sanitary work, although it is to be regretted that much of the data found under this head is untrustworthy These mortality tables, properly prepared will show the extent of mortality, and to what extent it is excessive in any portion of the community, and its relationship to age and nationality They will also show us the nature and causes of the diseases which occasion the excess of deaths and to what extent, and by what means, these diseases are preventable

This work begins with the physician, and ends with the registrar of vital statistics Many physicians perform the duty of certifying the cause of death with great care and exactness while others perform the same service with very little knowledge of the disease of which the person died, and with corresponding ignorance of the use and value of correct mortality statistics

Unfortunately in many States there is no legal discrimination between the duties and privileges of the educated and the totally ignorant practitioner of medicine The registrar who receives these certificates should be a well educated physician, with considerable experience so as to be able to reject fraudulent and worthless certificates Every one who has had experience in the registration of mortality reports, understands how difficult it is to secure correct data from irresponsible persons The cause of these shortcomings is partly insufficiency of diagnosis, due either to the difficulties inherent in obscure cases, or to imperfect medical training, and partly to a lack of conscientiousness in the performance of registration whose objects and importance are not appreciated

Obscure cases will occur in the practice of every physician, and due allowance must be made, and yet after reasonable allowances have been made, there still remains a degree of carelessness for which there is no excuse

It is a common thing to find on death certificates instead of the morbid process which caused death, such indefinite information as "disease of bowels," "disease of brain," 'disease of skin," "stomach disease," "ascites," "convulsions," "dropsy," "fever," "debility," "teething," "inflammation," "infantile," "heart failure," and other unlikely causes too numerous to mention, and which ought never to be used upon the records as causes of death

In my own city, such certificates are rejected, and a competent physician sent to view the remains, and consult the family or friends of the deceased for information, with which to make a proper certificate

It is to be noted, however, that information gathered in this way can not be regarded as wholly trustworthy, and often results in the statement of "*unknown cause of death* "

It would be in the interest of correct mortality statistics if the registrar could be authorized, in case of insufficient information, to cause such postmortem examination by a competent physician as will enable him to record the true cause of death

An examination of the mortality statistics will also betray the fact that we have an excess of deaths from contagious diseases and from diarrheal diseases among children, and while these facts open up a wide field of labor for the municipal sanitary officer, we shall have time to mention but a few of the most troublesome of these diseases

INFECTIOUS DISEASES

Smallpox, through the great discovery of Jenner, the ease of making an early diagnosis and its perfect and easy control by isolation and disinfection, is now one of the easiest and rarest comparatively of the contagious diseases with which we may deal

Now and then our legislatures are obliged to listen to the petitions of a few anti-vaccinationists for the repeal of compulsory vaccination laws I have too much faith, however, in the intelligence and sound judgment of our people to believe that these wholesome and necessary provisions will ever be effaced from our statute books

We should not, however, in the absence of smallpox in our country, allow ourselves to grow indifferent to the necessity of keeping the susceptibility of our people to smallpox exhausted by means of early and successful vaccination of infants, and the subsequent and most important revaccination of adults

The mention of cholera, like that of smallpox, strikes terror to the people of this country, and while the deaths from these diseases are infinitely small, the fear of them has served the municipal health officer in securing almost unlimited facilities for their prevention and control, which means may be largely converted to the care of other more common and destructive contagious diseases

We have in diphtheria and scarlet fever, diseases which are not only endemic in most of our cities and large towns, and of most difficult control, but diseases for which there is as yet no known prophylactic It is easy to say, and it is equally true, that perfect isolation and disinfection in all cases would soon annihilate the two diseases, but here is where the great difficulty begins We do not know where the infection is, in a very large percentage of cases, and therefore can not make anything like a complete application of our disinfecting agents

The diagnosis of diphtheria and of scarlet fever is not always possible in their early but contagious conditions, even by our best physicians, but with the multitude of ignorant and indifferent so called practitioners of medicine, who are called to attend such cases, and the many instances of mild attacks which do not attract attention, to say nothing of the semi-popular prejudice against the hospitals, we have the causes of the lack of information to the sanitary officer, the possession of which might lead to the control of the diseases

These diseases are spread largely by children while in the early stages of the illness, or having mild and unsuspected attacks, and by those who are prematurely released from isolation through ignorance and fraud, and allowed in the streets and in our schools

It would be out of place, as well as presumptuous on my part, to delay you at this time with the details of necessary public interference which would secure a mitigation of the prevalence of these two diseases I will say, however, that I believe in early and continued hospital isolation and that all cases should be supervised, and released from isolation only by medical officers appointed upon merit by the health authorities, the same medical officers to be inspectors of schools, in which there is much valuable work to be done in detecting the early symptoms of contagious diseases, pointing out the many unobserved and growing defects in development and disabled senses of the children, reporting to the board of health the overcrowded and unsanitary condition of the school room, inspiring an interest and pride on the part of all teachers to develop an aptitude in detecting early symptoms of disease, defective senses and deformities in children, and in developing a more popular interest in the needed reforms in school hygiene

At a very small cost, we might bring to bear the powerful influence and unoccupied energies of a large corps of talented young physicians, aided by over thirty-five thousand teachers, for the public and individual welfare of nearly thirteen million children in the public schools of the United States

Consumption, the most destructive malady to the human race in our country, has received the necessary attention of the bacteriologist He has demonstrated to us satisfactorily, the cause of the disease, the methods of its transmission, and the means for its prevention

I am sorry to say that as practical workers in public sanitation, we have sadly neglected to apply the means which we believe would prove effectual in largely abating the prevalence of tuberculosis

The isolation of all persons suffering from consumption, would be impracticable and perhaps unnecessary, but the use of small sputa cups containing a disinfectant, at home, and bits of absorbent napkin used and securely concealed in traveling, to be burned or otherwise disinfected on returning, should at least be urged by public health officers, and popularized as much as possble

In this way we should try to counteract the indiscriminate and disgusting habit of careless spitting in all public and private places, where the sputa are soon dried, and in the form of dust, start on the mission of deadly infection

It is interesting in this connection, to note the fact that from experiments conducted with the tubercle bacilli, the sputa from consumptive patients have been found to retain their infective power for several years, also the fact that at a recent international congress on tuberculosis, one of the questions discussed was the necessity of obligatory cremation of the remains of consumptives

Earth worms, it was urged, bring to the surface bacilli which infest the dead body, and in dry weather they may be inhaled in the form of dust. This, it is suggested, is the reason why the health resorts of the south of Europe are centers of tubercular contagion

Drs Lortet and Depugnes of Lyons, related cases of such infection, and described experiments which they made which led them to demand obligatory cremation They mixed the sputa of consumptives in earth which they placed in pots A month later the earth worms in them were tubercular, and the earth they passed through communicated the disease to animals

Other experiments were made by placing earth worms on the graves of those who had died of consumption, and it is said the results were confirmatory of the possibility of contagion being conveyed in this manner

CREMATION

It should not be necessary to urge the sanitary claims of cremation for dead bodies before an assemblage of intelligent sanitarians There are in this country already thirty-two cremation societies, fifteen crematories, and in the last five years there have been over two thousand incinerations

Typhoid fever, like cholera, has been studied most persistently and profitably in connection with our water and food supplies, and we shall have the pleasure of listening to a discussion of the causation of typhoid by infected milk at this congress

HABITATIONS FOR THE POOR

Tenement and lodging houses are subjects for the constant watchfulness of the health officer, and they are too frequently found in an overcrowded and filthy condition They are principally occupied by the poorest classes of people, including the newly arrived emigrant, whose habits of cleanliness are of the lowest order

It becomes necessary to limit the number of occupants in such buildings on a rule of a prescribed number of cubic feet of space to each individual, by placards posted in each room, compelling frequent scrubbing and disinfection of floors and walls, burning much of the old bedding, frequently disinfecting the remainder by steam, watching them by night and prosecuting every violation of your prescribed rules

CONCLUSION

Turning in conclusion from the more onerous everyday duties of the municipal health officer to topics of greater popular interest, we find an increasing growth of public sentiment in all parts of the country favoring the municipal provision of large public parks, free public baths, small open spaces and open air gymnasiums for the enjoyment and sanitary welfare of the masses of people whose whole time is spent in the toil of our large towns and cities Much of interest and encouragement might be said as to the immense patronage and benefit of these magnificent privileges if time would allow, but

I pass over these and other important topics which, I doubt not, will receive that careful attention and discussion their importance demands during the congress which is now open

ORIGINAL ARTICLES

THE TREATMENT OF GRANULAR LIDS

Read before the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY C B BLUBAUGH, M D
PARKERSBURG, W VA

Gentlemen —As an introduction to my article, the treatment of granular lids, I will say that I live in a portion of the Ohio valley where the soil is very sandy for miles from the river on both the West Virginia and Ohio sides To this fact I attribute, to some extent, the unusual prevalence of the disease in that locality During the past two years I have been so unfortunate as to have had 205 cases of more or less severity to treat Of this number 125 were treated with good results by the method I give you to-day, and the rest by all the usual plans of treatment recommended without, in some cases, the success I had hoped for I find that Druitt, in 1848, suggested scarifying the granulations, then, after a few days, he used lunar caustic on the granulations and applied citrin ointment to the palpebral edges In 1836, Mackintosh applied blisters behind the ears and dropped wine of opium in the eyes Gross used Goulard's extract for awhile, but soon quit it, as he found that it encrusted the cornea and produced mechanical obstruction, he then advised shaving off the granulations and applied sulphate of copper or a solution of nitrate of silver, twenty to sixty grains to the ounce of water Fenner used a strong decoction of phytolacca and considered the treatment especially good where there was a rheumatic diathesis or severe pain around the eye Dixon dusted the enlarged and inflamed follicles and papillæ with sugar of lead, but relies chiefly on hygiene and tonics to improve the general health, he says of all local treatment, the application of the undiluted liquor potassæ to the palpebral granulations, as suggested by Dr Bader, has been most successful It seems to act by saponifying and dissolving away the hypertrophied tissue Carter uses the *lapis divinus* daily or on alternate days according to the severity, and alternating occasionally with tannin or acetate of lead For isolated extreme hypertrophy the actual cautery has been used with success

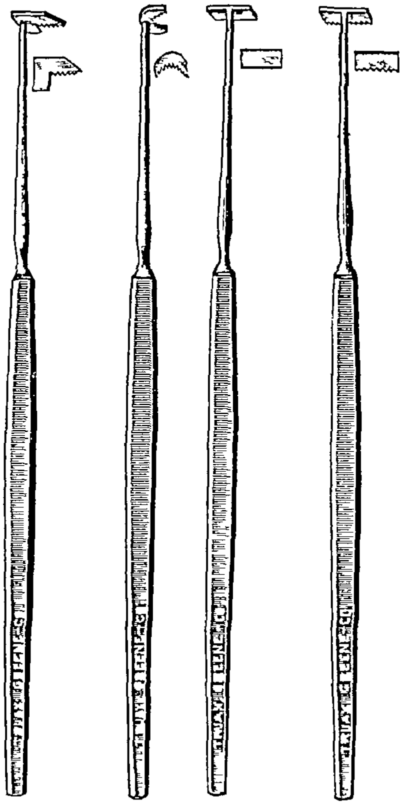
The ordinary,general treatment of the disease is nitrate of silver and sulphate of copper Arlt and Stromeyer called attention especially to the fact that these remedies were not intended to chemically destroy the granulations, but were to be used to maintain a certain degree of hyperemia in order to cause their absorption I think this important fact has, to a certain extent, been lost sight of, and they have been used to chemically destroy the hypertrophied papillæ I have seen so many ugly thick lids, with the whole mucous surface a cicatrix, presenting the condition known as xerophthalmia, and certainly due in a number of cases to the use of these drugs, that I have laid them aside entirely

In my own treatment the four little instruments I have here, play an important part, as with them the chronic granulations are removed

No 1 has a smooth edge and is used to scrape off slight granulations where there is no general hypertrophy

No 2 is the same general shape but has a file-like edge and is used in more severe cases

In everting the lids we frequently find the granulations thickest and hardest to remove just where the lid curves at the edge of the cartilage, here I use the curved instrument No 3



Above this, still, and near the retrotarsal fold, granulations are frequently found which neither of the instruments mentioned will reach, for these I use No 4, which has a long rake set at right angles to a shorter one, and will reach the high granulations without trouble, while the long rake is removing the upper granulations the shorter one will remove those situated on the curve Where the whole surface of the lid is hypertrophied presenting a gelatinous, granular mass, I have had, occasionally, to use the scissors After removing the granulations as thoroughly as possible, I give my patient a simple astringent wash, regulating its strength by the severity of the case, a lump of alum which I direct to be rubbed on the everted lid as the case may demand and let him go home In some very kind cases I have had to see the patient but once, in a number of them two to eight visits have been necessary In all my cases I look to the general health of the patient and, unless some special diathesis is present, I have found the best tonic to be a mixture of phytolacca and rumex crispis, especially where the cornea is involved In the majority of trachoma cases, pannus is present to a greater or less extent For such a condition where the cornea persists in remaining opaque, inoculation with pus from an active case of ophthalmia has been tried and with some success, as has also the jequirity bean; *abrus precatorius*, a Brazilian plant Gruening scrapes the cornea with a small knife, removing the opacity Where these all fail the cornea remaining opaque and vascular, peritomy or syndectomy has been done by a number of operators In my own practice I have used jequirity bean twice, in one case the result was all that could be desired In the other I had to work so hard to save the eye that I have not since entertained a kindly feeling for our Brazilian acquaintance In my other cases of pannus, from slight to total, I have had my patient spray the eye with a solution of tannin and boracic acid in glycerin and camphor water daily, and in addition wash the eye twice daily with a bichlorid solution A large number of cases of pannus vasculosa disappear when the granulations are removed without any special treatment The results have been peculiarly satisfactory in all the cases and the point I wish to make, in closing, is the fact that I have used neither nitrate of silver nor sulphate of copper in any case Of course I scrape off the granulations only in chronic trachomatous cases

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Dr J L Thompson—I would like to know if when a case comes to us in the first stages we should commence hoeing and scraping at once? In other words, should it be done in the acute stage of the disease, or only after it has become chronic?

Dr Scott—I can see no advantage in this treatment over that of expression It is simply carrying out the same thing, and I am sorry to say that this plan of treatment has not been satisfactory with me I have used it fully a dozen times, but with very little satisfaction, and in each case had to resort to the jequirity to obtain the desired result

Dr LeMond—I think I have treated within the last year near one hundred cases of chronic granular conjunctivitis, a number of which have been treated with Noyes' method of operating I press the follicles, squeezing the morbid contents of the parts, doing it gently but firmly I always avoid, as near as possible, not to tear or lacerate the conjunctiva The sooner you get rid of the spurious material the better it will be for your patient I usually follow this operation with a mild solution of bichlorid of mercury, using it as a bath for the eye about every three hours I also direct my patient to use hot water, as hot as can be borne, from nine to ten times a day five minutes at a time, I find it very much better than cold water in these cases Where I have not followed with the bichlorid treatment I prescribe a saturated solution of boric acid which I think also acts nicely Among these cases I have had the very best results from this course of treatment I think in all cases that have assumed a frog pawn condition we should have no hesitancy in resorting to Prof Noyes' compression, in fact, I think it is the rational thing to do I am aware that some oppose this method of treatment, but so far as I have found, among those who oppose it are men who have done the operation possibly once and in some instances not a single time

Dr Murrell—In my practice I have had many cases of granular lids I think we have more cases of this trouble and in a worse form in the South and West than in the East The oculists being few and hard to reach they go on without treatment until the disease gets in its worst form They come to us with lids shortened and suffering with blepharospasm and we find it necessary to relieve the pressure by performing a canthotomy, I have never performed it on any case where I have regretted it and have had as many as two hundred cases of granular lids myself during the year The treatment used is such as is suited to the particular case In suitable cases I use Knapp's expression forceps principally, sometimes Noyes', but the grattage I do not like Not every case is suited to the forceps treatment I have cured many cases by one single treatment with the forceps, followed by the use of the boracic acid solution four times daily I then direct the patient to use hot water as hot as can be borne three times a day letting it remain for half an hour at a time There are various other remedies we resort to but to be successful with any of them we have to first relieve the pressure on the eyeball by performing a canthotomy

Dr Dunlavy—It is my misfortune to meet a great number of granular lids It appears to me that there can be no law laid down as to how to treat a considerable number of them There is a certain class that can be treated successfully by the conservative method, while there is another class in which nothing short of surgical interference will be of any effect I use Knapp's forceps, Noyes' forceps or any forceps that I have in my case, my thumb nail or any other means by which I can destroy the granular tissue I am not one of the number who believe the subsequent reaction is beneficial, but we can not expect to do any surgical work without this reaction The method of surgical interference, that of making a canthotomy, as referred to by Dr Murrell is often one of the best steps where there is pressure from the lid, and we can not do it any too early If the granulations are at all chronic we might begin with our surgical means at once A class of cases kept well under antiseptic treatment will give very little trouble With regard to patients getting well with one application we have all seen them get well with scarcely any treatment at all

Dr Prince—We all have our views as to the surgical treatment, but if a case comes to us and we have it in the acute stage it seems we ought to do something for it before it finally gets to the chronic stage About two years ago my attention was called to a paper published in the *Ophthalmic Record* by Dr Hodges in which he recommended the following remedy for granulated lids There are two solutions used, nitrate of silver 1 dram, water 1 dram and glycerin 2 drams, marked No 1 Iodid of potash 1 dram, water 1 dram and glycerin 2 drams, marked No 2 Take 3 drops of No 1 and 6 drops of No 2, mix well and apply to the everted lid I am not sure whether there is anything in the iodid of silver or not, but I am sure from two years experience that in acute trachoma by the use of this remedy twice a day a cure is effected in a considerable portion of the cases within six weeks

Dr Savage—I will say that the Hodges' mixture has been a wonderfully good treatment in my hands I hardly know how I could have gotten on without it We not only have the iodid of silver and the iodid of potassium in the solution, but we have a third ingredient, the nitrate of potassium, as a result of the reaction Thinking that the virtue of the mixture might be due to the germicidal effect of the nitrate of potassium, for three months I have been prescribing this alone with a view of deciding this point My experience in the use of the nitrate of potassium alone for this period of time strengthens my belief that Hodges' mixture has for its effective ingredient the nitrate of potassium I use it in the strength of grs xx to xxx to distilled water 1 ounce

Dr Muncaster—I have seen a number of cases treated with expression and the conclusion I have come to is that Knapp's roller forceps have been better than anything I have ever seen After the operation I give the patient a solution of boracic acid and direct that it be used every few hours during the day, and also direct him to use hot applications several times daily, and have usually gotten good results

Dr Dudley S Reynolds—I fear the gentlemen have confounded widely different conditions, and have entirely overlooked the question of the stage of advancement at which the treatment begins I use no scarification, no scraping and no cauterizations In the trachomatous and lymphoid forms, expression by Knapp's forceps undoubtedly proves successful in many cases The hypertrophoid papillæ of the lining of the lid and retrotarsal folds are not to be treated this way without great aggravation of the disease In the first stages of papillary blepharitis I prefer the solution of bichlorid of mercury and chlorid of ammonium, suggested by McKenzie as a cleansing wash in purulent conjunctivitis As the purulent conjunctivitis always precedes hypertrophy this may be recognized as an entirely rational plan of treatment, varying the proportions of the bichlorid and ammonium chlorid I often apply the crystal of muriate of ammonium directly to the everted lid, pressing it gently but firmly for a few seconds at a time This may be done without pain by a previous application of a solution of cocain In some chronic cases an ointment of the yellow oxid of mercury acts well I know of no uniformly successful plan I, nearly always, as Dr Murrell has suggested, practice some modification of canthotomy in the very bad cases whether acute or chronic

Dr Blubaugh—I think I have been a little misunderstood in regard to the use of these instruments I do not use them in every case of granular lids, but I have not used nitrate of silver or sulphate of copper in any case In answer to Dr Thompson I will say that I do not do the hoeing and scraping in recent cases I have in a number of cases used some mild astringent wash and if these granules remain I rub the lid with a lump of alum There are a number of cases in which this is successful, but in other cases where the granulations remain I pick up my little hoe and go at it Dr Baker said the cases were a little more numerous in our part of the country than in Cleveland We have in our country that light, sandy soil and I think that starts cases which develop later on into granular lids or trachoma from lack of any treatment or attention A large number of these cases were from a portion of the State far from a railroad and where physicians were not numerous Quite a number had been affected for years and had had absolutely no treatment I would like to ask Dr LeMond and also Dr Reynolds if they have any cicatricial tissue after pressing out the granules with Knapp's forceps?

PHLYCTENULAR OPHTHALMIA

Read in the Section on Ophthalmology at the Forty Fourth Annual Meeting of the American Medical Association

BY DUDLEY S REYNOLDS, A M, M D
PROFESSOR OF OPHTHALMOLOGY, OTOLOGY AND MEDICAL JURISPRUDENCE IN THE HOSPITAL COLLEGE OF MEDICINE MEDICAL DEPARTMENT OF THE CENTRAL UNIVERSITY OF KENTUCKY

Phlyctenular ophthalmia has been so variously described by writers and teachers it would seem but fair to assume that each may have been faithful in describing that form most frequently observed in his practice Believing no form of phlyctenular ophthalmia should be regarded as a merely local form of disease, calling for local treatment alone, I am led to introduce the subject in its clinical aspects It is certain the herpetic disease described by Stellwag is just as much a local manifestation of constitutional dyscrasia as are the serpiginous ulcers, or the more common conoidal masses of lymphoid cells described by the old writers as scrofulous and syphilitic ophthalmia It is very important to distinguish between the phlyctenular diseases of miasmatic and malarious localities, and those observed in strumous, rachitic and syphilitic subjects According to some writers it would be difficult to determine the syphilitic from the non-syphilitic cases, but syphilitic keratitis rarely ulcerates, yet it is nearly always attended by photophobia, by anemia and other manifestations of disturbed nutrition In all forms of circumscribed inflammation it may be fairly assumed the processes of zymosis are going on, fermentation being, in fact, an essential feature of all localized inflammations

Change of residence, change of diet, in fact, any change in the modes of living result sometimes beneficially Phlyctenular disease of the cornea, like that of the limbus conjunctivalis, fluctuates according to the state of the patient's general health and nutrition, consequently a great deal has been claimed for local treatment in such cases In some circumscribed abrasions of the corneal epithelium a small gray speck is seen, called phlyctenular keratitis, often cured by a single drop of atropin solution, just as it would have been by a drop of boric acid solution or anything which would tend to diminish the morbid sensibility in the abraded spot. The more common types of this disease are observed in the early stages as conoidal elevations, surrounded by dilated blood vessels The oldest cells in the cone break down first, leaving a vesicular appearance at the apex of the cone, presently the walls of the vesicle rupture and the ulcerated stage is present, meantime the eye is morbidly sensitive to light and the patient, if the disease be in the cornea, is harassed with pain and disturbances of the digestive organs with more or less loss of appetite An aperient containing calomel followed by quinin often cures the patient in three or four days' time I have frequently observed this course in cases which had been subjected for weeks to local treatment of calomel, mydriatics, myotics and ointment of yellow oxid of mercury, so much in vogue with some of our brother specialists

Foreign bodies in the cornea often drop out and are washed away with the tears, leaving an epithelial abrasion which in persons of previous good health will disappear without treatment If infection of this wound should occur the indications of this state are so marked as to mislead no ordinarily careful clinical observer The treatment in such cases should, of course, be local and at the same time vigorous If, however, this is observed in children with fever, or even in an adult, constitutional disturbances call for constitutional treatment independently of the disease in the eye

It is not always easy to discover the cause of phlyctenular ophthalmia, just as it is often difficult to determine the syphilitic from the non syphilitic subjects among the poorly nourished children which are observed at the public clinics everywhere It is never safe to rely upon what is known as the history of the case as related by the family, and if I were not addressing myself to a body of gentlemen many of whom have at times engaged in the general practice of medicine, I should say the statements of the family physician are just as misleading and unreliable

If your patient is the subject of inherited syphilis and has phlyctenular ophthalmia you should not be able to discover the fact by the condition of the eye alone I have often observed phlyctenular keratitis as a complication of preexisting interstitial keratitis.

Thus the conditions stated in the description of inherited syphilis in Mr Hutchinson's famous prize essay, can not apply to a very large number of cases, and especially in children whose permanent incisor teeth have not yet appeared

That state of overloaded lymph channels, with enlarged lymphatic glands, at one time supposed to be indicative of tuberculosis or inherited syphilis, and for a long time denominated scrofulosis, is now known to be brought on by excessive indulgence in the glucose types of food, even starvation itself is attended by an abnormal increase in the lymph stream, and enlarged lymphatic glands

The late Dr Henry F Formad, of the University of Pennsylvania, demonstrated certain structural peculiarities in the lymphatic system of subjects of inherited syphilis, the children of tuberculous parents, and in those with acquired struma His researches show conclusively that some of the forms of mal-nutrition in infants result from faulty development in fetal life

Inherited syphilis, localized zymosis, mechanical obstructions in the capillary lymph tubes of the conjunctiva may each set up local changes which pass through all the varying stages of cell proliferation, disintegration, ulceration, and partake of those characters called phlyctenular disease, because of their circumscribed nature

Dr J L Thompson, of Indianapolis—The causes and conditions which bring about phlyctenular inflammations vary very much I meet with it far more frequently during the hot summer months than in the winter Living in an inland city where we have many sultry days and sleepless nights, cases of phlyctenular ophthalmia are the bane of childhood, especially where the strumous diathesis prevails I place no reliance in any one remedy unless it be change of climate When my patients have the means to do so, I urge upon them a change to the lakes, the mountains or to the coast No sooner is this change made than improvement takes place Where my patients are poor I urge upon them to keep as cool as possible, cleanliness, avoiding indigestible food, candies and all such trash Yellow oxid of mercury ointment in cases where the cornea is not ulcerated, and treatment to the alimentary canal when indicated Very often does this diseased condition hang on with one relapse after another until autumn weather sets in, nor does it stop here but repeats itself the following summer

Dr F C Hotz—I do not agree with Dr Reynolds that phlyctenular ophthalmia is of syphilitic origin in the sense in which we regard interstitial keratitis as a local manifestation of inherited syphilis Phlyctenular ophthalmia is undoubtedly influenced by any kind of malnutrition, and the treatment of these patients is unquestionably assisted by correcting any disorder of the digestive organs or any other condition which may affect the nutrition But local treatment is by far the most essential measure for subduing the present inflammation

Dr Connor—The best treatment of many cases of phlyctenular disease of the conjunctiva or cornea is a residence in a well conducted children's hospital Results are here obtained in a few days that require weeks or months of very many of these cases Proper food, sleep, pure air and regularity in treatment are very real factors in these results Of course, local and general medication are helpful, but the most efficient remedy is a dose of a good children's hospital I have found this same remedial agent a most satisfactory element in the management of many of the allied affections of the eye in children

Dr Zeigler—My experience coincides with that of Dr de Schweinitz The immediate origin of phlyctenular attacks is almost always nasal, and not constitutional, as stated by most authors Examination usually reveals associated lesions of the nostril and eye of the same side If you treat the nose the eye will frequently recover without treatment A simple treatment is by the nasal spray, and intranasal applications of tr benzoin comp two or three times a week, (applied with cotton on a wire applicator) You may use a simple wash for the eye An ointment of hydrarg ox flav may prove useful

Gastro-intestinal disturbances may originate or exaggerate the attack, by causing reflex irritation of the nose

I agree with Dr Thompson when he recommends regularity of diet, and especially in children who are continually eating cakes and candies which perhaps do more harm than any other variety of food But a worse error in diet is the coffee and tea furnished by parents to their children, which soon saps their vitality The worst examples of this unhygienic regimen are seen in hospital practice, and my formula has invariably been "no tea, no coffee, no cakes and no candy" These alone may bring recovery Of course the bowels should be kept regular Salt water baths are excellent for toning up the relaxed surface of the body

Dr LeMond—It seems very singular indeed that a body of men, banded together in the same work and being composed of the very best men in different parts of the country, would have such a variety of views concerning the same subject And yet it is true

I believe in trying to build up the general health in this phlyctenular trouble and the child, I tell the mother, should be bathed and rubbed down thoroughly twice a week, until a good healthy action is brought about by the skin, to give it good substantial diet, light supper but lots of good sweet milk In regard to local treatment I use usually, the yellow oxid of mercury ointment I apply this from three to six times a week, owing altogether to the severity of the case and if there is much photophobia and inflammatory action I prescribe also atropin, instilled into the eye, three or four times a day so as to guard against any ciliary complications

I protect the eye with dark glasses or by keeping the child in doors during the day and have it take its exercise in the twilight of the evening If this does not arrest the ulcer in a few days I apply directly to the ulcer, once a day a solution of argentum nitras, neutralizing the amount that might reach the healthy tissue with a solution of chlorid of sodium

Under this course of treatment, from one to three weeks, my patient usually gets well I have, in a few instances, applied the galvano cautery and have got very good results from that treatment However, in the majority of cases I think this latter treatment a little too heroic

In applying the yellow oxid of mercury if you will mix a drop or two of water with the same amount of mercury it gives us a perfectly smooth solution, which it is impossible to obtain by simply mixing with the vaselin

Dr Murrell—I use the yellow oxid locally and have frequently had complaint from its use In reference to the method of preparing the yellow oxid I think I can suggest something better than mixing the powder first with water and then with vaselin My druggist for a long time used this method but at my suggestion substituted olive oil instead, which readily blends with the fatty excipient and gives a uniform ointment

In concluding the discussion Dr Dudley S Reynolds said

Mr President, I am quite surprised that Dr de Schweinitz should have misunderstood my remarks in reference to syphilis I am sure no one would make a diagnosis of syphilis from any peculiar appearance presented in any form of phlyctenular ophthalmia by reference to the eye alone

I have seen cases which I felt sure were due to syphilis, but other manifestations of syphilis, so distinctly characteristic as to leave no room for doubt were present, without reference to the disease of the eye

I quite agree with Dr Gradle that nasal diseases are frequent complications, upon the relief of which, the successful treatment of the eye depends

My neighbor, Dr Thompson, points out the value of climatic changes He frequently observes a large number of these cases in the early summer, and if he is able to induce the parents to take the child away from the city, and remain until fall, he frequently finds no other treatment necessary I feel impressed these cases fall into the hands of general practitioners, and get quinin, iron, the iodids, baths, outdoor exercise, and the mineral waters, which, with change of diet bring on such improved states of nutrition as to completely remove the constitutional dyscrasia, upon which the local disease in the eye depends

Dr Connor of Detroit, expresses an important truth in his statement that hospital cases frequently relapse on returning home, and speedily recover when subjected to the hygiene and improved diet of the hospital

Eczematous eruptions of the face, and especially about the eyelids, should be treated as complications merely, and not as causes of phlyctenular disease, the yellow oxide of mercury ointment is no doubt valuable, in fact I am sure it is in eczematous complications, and in some chronic ulcerated forms of keratitis, but those are not to be counted as ordinary types of phlyctenular disease

The point I tried to make plain in my paper is, that all local diseases known as phlyctenular ophthalmia, not clearly due to traumatic causes, should be regarded as local manifestations of a constitutional dyscrasia, that constitutional treatment is always demanded, and local treatment if applied at all, should be mild and soothing, and never stimulating or irritating in character

Syphilitic cases are to be known by other manifestations independently of the disease in the eye, and call for certain modifications in the constitutional treatment only

Dr Gradle—A number of cases of phlyctenular ophthalmia will get well as quickly whether treatment be applied or not In other cases local applications change the course of the disease in such a decisive manner for the better, that no doubt can occur as to their efficacy In many of these cases where we can get a definite history we will find that the phlyctenular keratitis is preceded by a purulent rhinitis, and by proper attention to the nose the patient will often recover more promptly than if the nasal trouble is ignored Others are caused by adenoid growths in the pharynx and the removal of same very decidedly affects the case

While admitting the great importance of proper hygiene, rational diet, fresh air and baths in the prevention of relapses I can not say that any personal observation of mine or statements by others have ever seemed to me conclusive as to any influence of so-called constitutional treatment in the course of the attack

Dr de Schweinitz—If I correctly understood Dr Reynolds that inherited syphilis was one of the causes of phlyctenular ophthalmia I doubt if evidence to prove this assertion can be produced In so far as the treatment of phlyctenular ophthalmia is concerned, which I prefer to denominate phlyctenular kerato conjunctivitis, while agreeing with all that Dr Reynolds has said concerning the advisability of good food hygiene and proper diet, I believe local measures are of the utmost importance I am particularly impressed with the necessity of treating the naso pharynx in cases of phlyctenular ophthalmia of relapsing character, not alone because of the almost constant association of catarrhal rhinitis, tumefied turbinals, or adenoid vegetation, which of themselves are probably causative factors, but because their removal often suffices to remove the disease, to prevent a relapse and directly to improve the whole physical constitution of the patient The disorders of dentition bear some relationship to phlyctenular keratitis Borrowing an expression from Harrison Allen, I would advocate the exploration of the entire "cephalic mucous membrane" whenever this disease is manifest, and the correction of any anomalies which may be discovered

In closing, I would refer to the relation of astigmatism to this disease as taught by Martin of Bordeaux, who has pointed out that phlyctenular kerato conjunctivitis is common at that age of life when the habits of the child become such that the effects of accommodative strain, the result of an astigmatic cornea, are likely to become apparent

Dr Baker—This is an important subject to the practical ophthalmologist and is one on which I should like to see more stress laid as to the general treatment The main thing in the treatment of phlyctenular ophthalmia is the improved general health of the child and it is not from any direct interference with the eye I think the best thing that can be done is to take these children away from their families and put somewhere where they can be treated and dieted just as you would have them I believe that one of the best remedies is arsenic in small doses, one drop three times a day of Fowler's solution

Dr Gibson—I wish to say only a word on this line, in regard to the diet of children I think this a very important point, at least it has been in my experience We should study the diet of the children, then we know how to get at the treatment If we take away from a child what it likes it is not going to do well We may give maltin or extract of malt to aid in the digestion of starches Let them have their bread and potatoes Cod liver oil will supply the food in the line of meats You can get most children to use cod liver oil without trouble

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PURULENT OPHTHALMIA FROM THE STANDPOINT OF ITS SPECIFIC MICROBIC CAUSE,

WITH A PLEA FOR A MORE ENERGETIC, RATIONAL, ABORTIVE TREATMENT WHERE POSSIBLE

Read before the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association at Milwaukee

BY ALFRED HINDE, M D

SENIOR SURGEON EYE AND EAR DEPARTMENT, CENTRAL FREE DISPENSARY OPHTHALMOLOGIST TO THE NEUROLOGICAL CLINIC AND ASSISTANT TO THE CHAIR OF OPHTHALMOLOGY IN RUSH MEDICAL COLLEGE, CHICAGO, ILL

Progress is the watchword of ophthalmology, and we all wish to avail ourselves of the garnered harvest of the bacteriologist, and apply his well ascertained facts to the orbital corner in which we are specially interested So much ink has been used, so many brains employed for so many years on this threadbare subject of purulent conjunctivitis that it would seem to be an act of supererogation to again ask attention to it Yet when we consider its vast importance as a frequent cause of blindness, another modest effort to simplify the apparently different conclusions of equally authoritative observers is excusable

Further than a bare hint that the gonococcus occasionally resides in the discharges of an efflorescent purulent ophthalmia, little is *usually* mentioned of this specific microbic cause in the great mass of contemporaneous literature It would seem that since Neisser[1] of Breslau, in 1879 discovered this diplococcus, the peculiarities of its existence, growth, action and habitat have not been as *universally* considered by our clan as the importance of the subject demands, and to this fact is mainly answerable the diverse methods of treatment of the results of this potent microorganism It is, therefore, in the literature of the genito-urinary tract that we find our richest rewards of observation, and in the subsequent lines the statements made are largely drawn therefrom

As special students we must extend our observation to all the data of the microbe under consideration, for it is now scarcely contestable that the majority, if not all, the cases of purulent conjunctivitis are produced by this coccus,—as proven by careful microscopical research, and through cultivation or implantation experiments by competent bacteriologists

This bacterium is variously described as spheroidal,[3] ovoidal, hemispherical[4] or biscuit-shaped with one surface flattened It appears in pairs, or multiples, with the flattened surfaces toward each other, hence a diplococcus It multiplies by elongation and division, and a single germ gives rise to a colony In size it varies with age but its usual dimensions are about 1 6 micro-millimeters from[6] pole to pole, and in width about 0 8 to 0 6 *micro-millimeters* It thrives on mucous surfaces, and best on those covered with a cylindrical or a modified cylindrical epithelium It stains readily with the basic anilin dyes Pus spread out in a thin layer on a cover glass, dried naturally, passed rapidly and momentarily through a spirit flame to coagulate the albumen, immersed for one minute in a solution of[7] 1 part methyl-blue, 33 parts alcohol and 66 parts water, then well washed in water, dried carefully, and *mounted* in (turpentine) balsam or glycerin, and examined with a magnifying power of 450 or more diameters will demonstrate the blue-stained microbe, if present Steinschneider,[8] however, regards Gram's[10] method of staining microorganisms as necessary to the satisfactory study of the gonococcus, as a positive characteristic of it is that by this plan it is not stained, "while nearly all other diplococci found in the urethra are colored thereby " Roux[9] also agrees with this conclusion after a study of eighty-six gonorrheal patients, and Senn adds "The entire certainty of this test is rendered absolute by the observation of the further characteristic of the gonococci, namely, *that they are found within* the pus corpuscles."

Dr J Schutz[11] of Frankfort, advocates a method of staining that depends on the known resistance of the gonococcus to acetic acid after being colored with methyl-blue Preparing the cover glass in the usual way it is allowed to remain for five to ten minutes in a cold, filtered saturated solution of methyl-blue in 5 per cent carbolic water It is then water washed and dipped for one moment, or until one, two, three, can be counted, in acetic acid water (acid acet dil mv aq 20 cc) and immediately washed in pure water The acetic acid decolorizes all other organisms except the gonococcus which remains distinctly blue "Double staining with safranin can now be done when *the gonococci* and epithelial cells show a blue color, while the pus cells and their nuclei are found salmon colored "

Experimental cultivation of the gonococcus is difficult save in the serum of human blood, or less well in animal serum, either solidified by sterilized gelose (M Hueppe[12]) Inoculation with pure cultures[13] invariably produces gonorrhea in man In drying *the microbe loses its virulency*, and pus containing it after dessication, fails to produce the specific[14] inflammation either when applied dry or when moistened with water Again, the microbe does not long retain its virulency when kept moist, yet removed from its chosen soil, for Welander in four implantation experiments made three with pus from one to several days old and in these the results were negative In the fourth the pus was removed only three hours before and kept at body temperature, and on the third day after implantation smarting was complained of, and two days later a typical gonorrhea developed Two experiments in which the pus was exposed to a temperature near freezing resulted negatively Wertheim, however, claims that their virulency is not lost rapidly in artificial culture media, for he found a four weeks' culture in human blood, still very virulent He says the microbes must be protected against dessication and that they develop better when protected from oxygen[15] The artificial cultures grow only at body temperature and the colonies *readily die off* Subcutaneous injection of gonorrheal pus in animals produced no reaction[16] and in twenty-four hours afterwards the cells remained unchanged but the gonococci had disappeared Wertheim[17] claims that it can produce peritonitis in some animals and he found the microbe in the walls of the abdomen, in the epithelium and connective tissue, and that it travels like other pyogenous germs by way of the lymphatics

During research the gonococcus has been found in the urethra, bladder, kidney, perimetric abscesses following gonorrhea, in the purulent contents of joints in gonorrheal synovitis, in the conjunctiva, rectum, uterus, cervix, vagina, vulva and in Bartholin's glands Its principal habitat in the pus corpuscle is more important than its diplococcus form When implanted on the mucous membrane of the urethra or on the conjunctiva, its first growth takes place upon the epithelial layer and the deeper parts are not invaded until, by inflammatory or chemotactic changes, the intercellular cementum has been dissolved, thus loosening up the epithelia and opening up *inter* and *sub* epithelial passages Without these changes deep or sub-epithelial infection can not occur, and Bumm[18] claims that on account of the dense, compact epithelial layer of the adult vagina that a true gonorrhea of this tract is impossible, while it may occur in children He further states that ' The stratified epithelium of the bladder is impenetrable to the gonococcus " In the incipient stage of infection the secretion is merely an exaggerated physiological one of thin mucous fluid somewhat serum-like in appearance, and containing mainly exfoliated epithelia and a few pus cells with the diplococci present on the surface of the epithelia and a few are found within the pus cells Soon the microbe penetrates the sub epithelial lymph spaces and the inflammation extends more deeply and after the second or third day the secretion becomes profuse and contains fewer epithelia with pus cells greatly in excess, and from 2 to 3 per cent of the latter contain gonococci and usually two or more in a corpuscle From now on the pus cells increase relatively in number to the epithelia, and more of them contain the microbe until 20 per cent. possess them. When the subacute stage is reached the epithelia increase in number and the pus cells become fewer yet a greater proportion of the latter contain the gonococci, and more numerously. In the fourth week the epithelia are most numerous and possess the microbes while the pus cells are few. It is claimed that the cell nucleus can be invaded, and that the cell may also become distended and ruptured by the number of the contained cocci. Extra-cellular gonococci are also plentiful. Human serum we have noted as the choicest medium for their growth, hence the virulency of this infection in purulent conjunctivitis.

This bacterium produces suppuration only on continuous mucous surfaces, and it results from the irritative effect on the tissues of the absorption of the chemical substances produced by them, because pus cells emigrate to the surface before the microbes have reached the vascular layer. These same pus cells are but dead embryonal cells, or leucocytes, attracted by phagycytosic action to the infected focus in order to prevent the ingress of the cocci, or to destroy them, and by embodying them within their own walls they become ptomaine poisoned themselves and destroyed. The inflammatory exudation of cells, fibrin, and serum tends to loosen up the epithelia and aids their exfoliation. Cessation of suppuration is not synonymous with stoppage of infection for increased irritation may again arouse the chronic inflammatory process still present.

The gonorrheal micrococcus and that of purulent ophthalmia are now almost universally conceded to be identical. Prof. Haab[19] of Zurich, claimed: "That the gonococcus is always present in the secretions of purulent ophthalmia and that it is never present in the simple inflammatory, or catarrhal form." Widmark[20] examined the secretion in twenty-four cases of purulent ophthalmia and found the cocci in most of them, free in the secretions, in the pus and the epithelial cells. He believes that during the incubative stage the microbes are only attached to the epithelial cells. This latter observation is in line with that of other examiners and most forcibly suggests an early, rational and effective treatment while the specific microbic cause is encompassable and before its ptomaine poisoning of the tissues has resulted in serious complications—due to impairment of their normal physiological resistance. Before exudative and immediate pressure have resulted in cellular necrosis and molecular death of the ocular tissues, thus producing an *infection atrium* for the entrance of the ordinary pyogenic microbes. Here the omnipresent streptococcus, and may be the staphylococcus, often take up the work of ocular destruction after the gonococcus indirectly has opened the doorway of tissue infection and reduced the resistance of the remaining cornea, and alas! they too often never end until the visual organ is utterly destroyed. That the gonococcus is a pus microbe in the usual sense is still debatable ground, yet cases have been recorded where this microbe has entered the circulation and produced metastatic abscesses after mural implantation in parts distant from the original focus. In these now numerously recorded cases of systemic infection, with septico-pyemic symptoms and occasionally fatal results we have most often only the fever and the *locus minoris resistentiæ* produced by the absorption of the toxins of the gonococcus, followed by the localization of the floating pus microbes in the affected tissues of various regions of the body. In short, a secondary infection. The gonococci have, however, been demonstrated in the contents of such abscesses, and are also found in the effusions into the joints of gonorrheal rheumatics, and in the blood of such patients.

This condition of secondary infection suggests the query of the harmonious co-existence of the pyogenous microbes and gonococci on the same site. Here there appears to be apparently contradictory statements.

That secondary infection can occur was first positively proven by Breiger[21] and Ehrlich in 1882, where the pathological product of one infection aids in the localization of another kind of pathogenic germs,—one microbe preparing the soil for the growth of the other. The gonococcus it is claimed,[22] can so change the resistance of the tissues of the genito-urinary tract, of women especially, so that an easy invasion of pathogenic microbes occurs. As an example is given by Bumm a pure gonorrhea of the vulvo-vaginal glands which after the suppurative stage remains chronically inflamed for months and is followed by sclerosis and atrophy of the glands. But if a purulent infection is added the gland enlarges and suppurates but the contents of the abscess possess no gonococci. "The pus only contains the pyogenic staphylococcus, which has exterminated the gonococcus." Bumm also claims that a cystitis following a gonorrhea, that a suppurative parametritis after gonorrhea is analogous to a gonorrheal bubo, and all are examples of mixed infection, with pus microbes, because: "The gonococcus expends its action in the superficial layers of the mucous membrane exclusively." Delafield and[23] Prudden, however, after describing the location of the gonococcus and its subsequent inflammations write: "Under these complicating conditions the gonococcus may occur alone, or in association with the pyogenic cocci."

Prof. Haab[24] in Zurich, often met with cases of iritis, irido-cyclitis and conjunctivitis in gonorrheal patients, "without any direct transmission of the urethral discharge" and in such no gonococci were found in the conjunctival secretion and the attacks were mild and readily overcome. These cases were examples of rheumatic and not microbic inflammations. He reports one case of mixed infection with metastatic joint abscesses, etc., with loss of one eye and great impairment of the other, together with persistent fever of many weeks' duration, and threatened death.

Dr. Bedford Brown[25] of Alexandria, Va., records a case of gonorrhea followed in three weeks by gonorrheal synovitis of both ankles and knees, with violent inguinal lymphadenitis of both sides, septic endocarditis, and "deep seated pain in the eye without conjunctivitis." The final result on the vision of the affected eye is not stated, and this is unfortunate because it may have been a metastatic suppurative choroiditis followed by phthisis bulbi,—a not very uncommon affection of the eye in cases of septico-pyemia arising from systemic infection with pus microbes.

A personal observation of such result may be given in the following case.

A child twenty-seven months old was taken sick with scarlet fever of mild character. Two days after the onset of the attack the left knee joint became inflamed and the left eyeball was slightly reddened, and the submental lymph glands enlarged. The knee joint suppurated and was opened two weeks later and its purulent contents removed and finger-sized drains left *in situ* and treatment continued in the usual way. The irregular fever which varied from 99 degrees to 105 degrees F. still continued and septic pneumonia, or other focus, was suspected as the cause of its persistence, but nothing positive could be made out. At the end of six weeks from the onset of the sickness, and after the institution of marked marasmus, the left eyelids swelled up and the eyeball became red and chemotic, and supposedly painful. The appearance was that of a mild suppurative choroiditis and as the inflammation disappeared, the eyeball softened and began to shrink and nine weeks later this eye was sightless, half-sized and boggy. The neck glands did not suppurate and the septic fever gradually subsided and uninterrupted recovery occurred.

Innumerable cases of secondary infection after gonorrhea have been recorded and, amongst others of less severity, one occurred in my own practice in which, after an imperfectly cured gonorrhea, a prolonged cystitis with general septic infection followed, associated with an irremovable and intermitting fever, and exhaustion almost fatal. Recovery set in slowly on improvement of the urethral and bladder condition, the systemic microbes most probably being thrown out through the kidneys, as at no time could any local suppurative focus be outlined in any organ. One year later, after a new exposure and infection with the gonococcus, the cystitis recurred followed by septic infection and a left pneumonia of small area at first, and of insidious onset, and multiple subcutaneous abscesses, together with a profuse suppurative otitis media of the right ear. No crisis occurred but the lung inflammation continued to spread until fever and heart exhaustion, practically unaffected by all treatment, resulted in a fatal issue. In this case the gonococcus twice prepared the soil for the successful implantation *in loco* of the commoner streptococcus pyogenes—as this is the microbe, that is almost solely and invariably found in these cases.

The gonorrheal microbe, however, can not always be blamed for the production of the *locus minoris resistentiæ* within the ocular tissues. It is well known that floating pus microbes are present in the blood current of many marasmic patients. All that is necessary for the localization of these cocci in the ocular tissues is a reduction of the normal physiological resistance of some portion of the eyeball. In these non-resistant cases this can be brought about readily by inflammatory changes and operative procedures."[26]

Here we have an explanation of those eyes lost in a suppurative process after perfect healing of the corneal wound, subsequently to a smooth cataract extraction. We must invigorate such patients and remove these bacteria, before we add operative insult to their tissues. Again, it is well known that pus microbes can long remain quiescent in old osteomyelitic foci and years later become virulent when suitable conditions of tissue injury arise for their multiplication. Have we not a parallel to these surgical cases in those old sympathetically and otherwise inflamed eyes that flare up into acute inflammation as soon as we attempt to remove the old exudate, or perform an iridectomy? The imprisoned microbes are set free by our manipulations and are again surrounded by a suitable environment for activity and reproduction. For diagnostic purposes the presence of the gonococcus within the pus corpuscle implies a gonorrheal origin of the eye affection, and yet by so many, and devious paths it reaches the conjunctiva that in some cases its source is past finding out, and we may, unfortunately, be led to question the specific character of the conjunctivitis, unless we look for and find the microorganism. For a moment we may consider the immediate and remote sources of infection. The essential element is carried to the conjunctiva usually on fingers, linen, or sponges, may be from unclean wash basin or other object in auto or other cases, accidentally or intentionally. Dr. Symes,[27] in the meeting of the New York Academy of Medicine, Nov. 10, 1890, called attention to the supposition of the ignorant gonorrhea sufferers who, in some instances believe that they can get rid of the disease themselves by giving it to somebody else, and at the same meeting Dr. Robert Abbe[28] said that Dr. Willard Parker had given expression to a similar observation. Twice patients of my own have asked me if this unclean intent was not a fact.

Age does not limit the possibilities of an infective source, for catarrhal inflammation, usually of gonorrheal origin, of the vaginal mucous membrane is not infrequent[29] in the newborn, and the infant and youthful vulvo-vagina often equals the adult tract as a prolific focus of infection—the parents, or adults, being the initial source of all such cases. Moreover, the normal puerperal vaginal secretions will not[30] produce a specific catarrhal inflammation of either the vulvo-vagina or the conjunctiva. Potts[31] examined ninety six cases of purulent vulvovaginitis in children, a majority of whom were under five years of age, and he believed that they were all of some specific infection, and examination of the discharge usually revealed the gonorrheal microbe, and only three cases were due to direct gonorrheal infection. Prochownick[32] found the cocci in seventeen out of twenty-one similar cases, and in these urethritis was a prominent symptom. Sanger[33] thinks that pyosalpinx and pelveo-peritonitis of young virgins is possibly due "To a gonorrhea contracted in childhood through indirect infection." Spaeth[34] in twenty-one cases of vulvo-vaginitis in girls from three to eleven years old found gonococci in the pus of fourteen, and the urethra escaped in the non specific cases. On investigating the source he found that the mother had gonorrhea in eleven, the father in two, and violation had occurred in three of the children. Gonococci are most numerous, he says, in the urethral discharge of adult females with gonorrhea.

Dr. Van Arsdale,[35] at the New York Academy meeting already referred to spoke of three cases in young female children, the youngest being only ten months old, and said that he saw about ten such cases yearly and attributed the infection to sleeping with parents. Dr. R. Abbe reported a gonorrhea in a boy three and one half years old, contracted from a nurse, and gonococci were found. Dr. Hugo Feleki of Buda-Pesth, before the twenty-fourth meeting of the Hungarian physicians and scientists at Kronstadt, recently held that blennorrhea is much more common in women than is generally supposed, and its consequences more far reaching than would appear The women are infected in the first days of matrimony by husbands supposed to be but not actually cured of a chronic gonorrhea He claims that the urethral inflammation may exist for some years without secretion showing, and yet will provoke in women a typical gonorrhea

From the foregoing, the genitalia of the female would appear to be the most fruitful source of infection, and mothers and nurses the most probable starting point On this account conjunctival inflammations in females should always be regarded with greater suspicion than in males, and I have very frequently remarked the onset of a purulent conjunctivitis in adult females commencing soon after the initiation of the regular menstrual flow—the auto infection being most probably due to unclean fingers in infected subjects For obvious reasons in both sexes a commencing right eye inflammation alone is more liable to be specific than simple From such frequent possible sources of infection as we have here shown, together with the great frequency of the presence of the gonococcus in the purulent discharge from the genital canal, it would seem to be injudicious in practice to doubt the gonorrheal origin of all our cases of purulent conjunctivis Better for our patient's safety if we immediately consider the graver diagnosis and institute correspondingly effective measures of relief

We have fixed the cause of the disease and located its exact position in the epithelial layers of the mucous membrane, and in those portions of the conjunctival sac covered with a cylindrical or a modified cylindrical epithelium, viz, the palpebral portions and that of the fornices, the very parts that give evidence of the greatest inflammatory reaction Whereas the ocular or scleral conjunctiva and the surface of the cornea remain practically unaffected, because of their compact, stratified, epithelial layer, until pressure necrosis results in ulceration and secondary infection

A good prognosis depends upon adequate treatment in the early periods of the disease, and before ocular complications occur

Prophylaxis is advocated and abortive treatment resorted to in purulent ophthalmia of the newborn eye Why is it not equally advisable in all eyes so affected irrespective of age? Logic and sound judgment point undeniably in such direction In all these purulent cases there is a period of apparently simple catarrhal inflammation associated with a lachrymal-mucous secretion A time during which the microbes are only on the surface of the epithelial cells and before the ptomaine poisoning of the tissues has resulted in attracting the emigrating leucocytes from the capillaries to the surface of the mucous membrane

The general practitioner is the most favored in seeing these cases in this stage and, unfortunately, he fails too often to recognize its import, and either neglects treatment or prescribes the usual zinc solution, and the case is too often not referred to the specialist until complications have arisen and fear possesses the medical mind *Without microscopic diagnosis no one can foretell the limits of a conjunctival inflammation when seen in the earliest stage! Any case may become purulent after sufficient time has elapsed, if the necessary microbe has been implanted!* Careful inquiry during the incubative period of these cases often gives positive evidence of a proximate gonorrheal focus, in men especially Whereas, in women, beyond eliciting the information of the omnipresent vaginal discharge, an inquiry is usually negative In busy practice we can not easily stop to stain and examine with microscope the discharge in every case of conjunctivis *Can we resort then to any therapeutical procedure in all such cases that will prove adequate in the purulent and at the same time harmless in the simple inflammations? We can most assuredly* The genito-urinary surgeon has authoritatively advocated the abortive treatment of a gonorrheal inflammation in his own domain, and briefly we will refer to his conclusions At a late meeting of the International Dermatological Congress Prof Neisser[36] still maintains the etiological importance of the gonococcus That microscopic discovery of the microbe in the secretions of gonorrhea is essential to a correct diagnosis That it is only in the first stages that the virus is accessible in the superficial layers of the epithelium and is then easy to treat His aim is to prevent an acute changing into a chronic urethritis, and referring to treatment states "It should therefore be commenced as early as possible after infection "

(*To be continued*)

Duels Better Fought in the Early Morning—The *St Louis Globe-Democrat* is our authority for saying that the best time for going into battle is just before breakfast That paper gives us the following item

"Dr Bernays greatly interested Surgeon General Sternberg by a proposition he laid down that when a man is shot in the abdomen shortly after eating a hearty meal the danger is much greater "A case of that kind should be operated upon in every instance," said Dr Bernays "If the bowels are empty, or nearly so, the same wound may be treated without operation "

"Applying that theory to soldiers?" remarked the Surgeon General tentatively

"I would say they ought to do their fighting before breakfast," put in the specialist

From time immemorial, the early morning hour has been the chosen time for the duello, for the "settlement" of private quarrels It is a logical arrangement, and moreover the appetite for breakfast is not sharp until after the quarrel has been appeased

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[1] Cent f Med Wiss No 28

[2] Prof Haab, Zurich (Der Micrococcus der Blennorrhea neonat Weisbaden 1881) quoted by Senn, 'Surgical Bacteriology, 1891 p 236

[3] Delafield and Prudden Pathological Anatomy and Histology, 4th Ed, p 572 [4] Senn 'Surgical Bacteriology," p 230

[5] M Wertheim, Annales de Micrographie T iv No 7 1892 p 59

[6] Legrain— Arch de Physiolog norm et path '1887, No 6 See Senn l c p 230, et seq

[7] Smidnoff—quoted by Senn l c p 231

[8] Quoted by Senn l c p 239, also Medical Record March 14 1891 p 317 [9] Senn l c p 240

[10] Delafield and Prudden l c p 132

[11] Medical Record Nov 23, 1889, p 568 Senn l c, p 232 from 'Münch med Woch " No 14 1889

[12] M Wertheim l c

[13] Bumm Bokar Bockhardt quoted by Senn l c, p 233

[14] Welander quoted by Senn l c p 233 Wertheim l c

[15] Delafield and Prudden loc cit p 165

[16] Bremen—quoted by Senn loc cit p 234

[17] loc cit [18] Quoted by Senn loc cit p 235

[19] Quoted by Senn, loc cit p 236 [20] Ibid

[21] Berl Klin Wochenschrift, 1882, No 44 quoted by Senn loc cit p 48

[22] Bumm (Le Bull Méd Dec 25, 1887), quoted by Senn loc cit pp 49-50 [23] Loc cit p 165

[24] Correspondence, British Med Jour, June 2 1888

[25] Medical Record, Nov 21 1891 p 640

[26] See H Knapp s 'Experiments on the Action of Bacteria on Operations of the Eye ' Archives of Ophthalmology, March, 1886, pp 24-50

[27] Medical Record, Dec 20, 1890, p 711

[28] Loc cit pp 711-712

[29] Delafield and Prudden loc cit p 578 [30] Noyes loc cit pp 299-300

[31] Arch f Gynak, B xxxii Heft 3 quoted by Senn l c p 239

[32], [33] and [34] Ibid [35] Medical Record Dec 20 1890 p 711

[36] Atlanta Medical and Surgical Journal, Chicago Medical Bulletin April 1 1893

[37] Paris Cor of the JOURNAL AM MED Assoc quoted by the Medical Record Nov 3 1888 p 592

[38] Gaz des Hôpitaux Oct 13, 1891, quoted by Medical Record, March 26 1892, p 347

METHYL-VIOLET—ITS PLACE IN THE AFFECTIONS OF THE EYE

Read before the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY FLAVEL B TIFFANY

KANSAS CITY, MO

Since the day I first read and translated Prof J Stilling's articles on the subject of methyl-violet as they appeared in the *Revue General d'Ophthalmologie* in the year 1890, I have almost daily resorted to the drug as one of the remedies in the treatment of the various affections of the eye For perhaps a year or more from the time this drug, as a therapeutical agent, was introduced by Prof Stilling (as is the case with most other new remedies indorsed by authority), it was extensively discussed in all medical literature throughout the land Many if not all ophthalmologists tried it in one form or another in one disease or another, and some were pleased with it while others were disappointed Some were satisfied of positive results and added it to their list as a good and reliable remedy Others were disappointed, getting as they believed no good effect so discarded, denouncing it as without merit

When my attention was first called to the therapeutic properties of this agent, it happened that I had several patients on hand suffering from serious diseases of the eye, such as suppurative inflammation of the uveal tract, which had resisted all known treatment ordinarily used, and were marching on to the destruction of the eye In these cases the methyl-violet certainly checked the disease and in some of the cases I believe it saved the eyes In my enthusiasm and from Stilling's glowing account of its positive antiseptic qualities as an indemnity against all pyogenic influences, taking but the slightest attenuation to prevent all decomposition and putrefaction in any and all conditions, I employed it in nearly every affected eye that came to my public clinic as well as that of my private practice.

I tried it in all forms of conjunctivitis, in simple catarrhal ophthalmia, phlyctenular, granular and purulent ophthalmia, and in the different forms of iritis, dacrycystitis, hyalitis, disease of the cornea as the different forms of keratitis, ulceration of the cornea, in diseases of the choroid, in fact, there is scarcely a disease or affection of the eye in which I did not use methyl-violet Not, perhaps, from my credulity or great faith in its panasite properties, and yet if it was the non-irritant and searching antiseptic that was claimed for it, taking for its predilection the germ of all activity, paralyzing and destroying all pyogenic bacteria and believing as we do that the etiology of disease is of some form of microbe, it would not be wondered at that in my eagerness I should give it a thorough trial which I did In many diseases I have found it most efficient, while in others non-efficient, being as it were perfectly nil In some I have found it positively harmful, acting as a decided irritant In some cases where it has been long continued I found that it produced pain and soreness of the globe and in some instances I believe atrophy has followed in consequence of its continued use

In most forms of conjunctivitis it is non-reliable In purulent ophthalmia, as of the newborn or gonorrheal, its action is so uncertain as to make it unreliable, in some instances it has worked like a charm, acting as an antiseptic and dispelling purulency like magic, in others it seems to have no effect, or if any that of an irritant In one case of ophthalmia neonatorum where the baby's eyes were doing fairly well, but not being quite satisfied I resorted to the use of methyl violet, suddenly the eyes grew worse and they went from bad to worse and in spite of all I could do the cornea sloughed and both eyes were lost

I have been disappointed in its efficacy in trachoma In this disease it is entirely nil, or has been in my hands, with very few exceptions I recall, however, one or two cases where in trachoma with blennorrhea of a chronic persistency, resisting all ordinary treatment, as of the trachoma forceps, brushed with the toothbrush, etc, by the use of methyl-violet a speedy cure was brought about

There is one form of conjunctivitis and that one too that is most obstinate, frequently resisting for many months all treatment, where the methyl-violet has in my hands and with the proper systemic treatment worked speedy cures This is phlyctenular conjunctivitis In nearly all forms of keratitis that frequently extend over a period of ten to eighteen months before a cure can be brought about, and then at the best, conicity of the cornea with myopia, I have with methyl-violet cut short the disease where the cornea was so densely opaque as not to admit of any perception of the iris or pupil In absolute blindness due to dense opacities of the cornea, I have succeeded in clearing the cornea in as many days as ordinarily requires months with the old treatment

In ulceration of the cornea it is a most valuable remedy, next in efficacy to the thermo-cautery In suppurative iritis from its penetrability, non-irritant and antiseptic properties, as well as of a mydriatic it is of great value In hypopyon it acts like a charm cutting short the suppuration Soon after it is dropped upon the cornea you will see the pus in the anterior chamber taking on the violet stain, and in a few hours the pus begins to diminish in quantity and frequently have I cleared the chamber of quantities of pus in a few days, where panophthalmitis was imminent In hyalitis and all affections of the uveal tract it is efficient, and in one case that I had diagnosticated as melano-sarcoma of the choroid, the tumor by the use of methyl-violet was held in abeyance, and in one case of glioma of the retina the methyl-violet arrested the growth and as long as the child was under observation, (for several months), the tumor gradually diminished

To sum up, the affections of the eye in which methyl-violet seems most efficient and reliable are the following phlyctenular conjunctivitis phlyctenular keratitis, interstitial keratitis, ulceration of the cornea, abscess of the cornea, hypopyon, all forms of iritis (especially if combined with atropia) in diseases of the choroid, as choroiditis and hyalitis, tumors of the choroid and tumors of the retina and in chronic leucoma

Among those affections in which it seems to be non-reliable or contra indicated, are most forms of conjunctivitis, trachoma, marginal blepharitis, purulent ophthalmia and pannus

The form of the drug that I employ is the solution 1-2000 to 1-1000 in strength, occasionally I have employed as strong a solution as 1-500 The pomade has not been at all satisfactory in my practice

Dr J H Thompson—Individually I have not used the methyl-violet, but I have seen it used in several cases, and I have never seen it used but that most valuable time was lost I have seen it used in eyes and they would be destroyed, not from the methyl-violet but because a disease was thus allowed to run too long for any after treatment to be effective In general surgery as well as in ophthalmic practice such has been my observation, so I have come to the conclusion that the drug is useless

Dr Hotz—Observations of this kind are absolutely worthless To use a drug indiscriminately for almost every disease the eye may be afflicted with is not a scientific experiment but empiricism Methyl-violet was introduced by Prof Stilling under the name of "pyoktanin," i e , pus killer, to emphasize its most prominent quality Now if we wish to find out for ourselves whether this remedy possesses this pus-destroying power in so eminent a degree we must test its power in such suppurative affections which we know usually run a very destructive course Serpiginous ulcers of the cornea, hypopyon keratitis, gonorrheic conjunctivitis, these are conditions where pyoktanin can show its virtues if it has any My tests had the following results in suppurations of the cornea it seemed to arrest the formation of pus cells, for the hypopyon and the yellow infiltrated border line of the ulcers disappeared, but in most cases the disintegration of tissue went right on leading to extensive softening, and eventually to perforation of the cornea In one case of incipient gonorrhea of the conjunctiva pyoktanin seemed to cut short the attack, only a mild form of simple conjunctivitis followed its use But in other cases of gonorrheic ophthalmia, in all cases of blennorhea of the membrane its applications were utterly ineffective I have come to the conclusion that pyoktanin is a useless remedy But when we are told it had cured a glioma of the retina, I believe the only rational explanation we can offer is that there was a mistake in the diagnosis

Dr Tiffany—Dr Hotz in his remarks deprecates the efficiency of methyl-violet in neoplasms and all forms of tumors He says that all that is claimed for it is its value as an antiseptic We all know that this drug in our histological preparations is one of the best stains that we have, taking for its predilection the nucleus of the cell If we concede that the drug is an antiseptic a destroyer of microbes, I see no reason why it may not in a similar way control cell proliferation of tumors and neoplasms at any rate, we all know that it has been extensively used not only here in America, but in Europe, and by good authority who claimed for it the power of checking if not dissipating entirely these growths I am sure my experience will bear me out in all I have said in my paper Very recently, within the last few days, I had a case of hypopyon where the anterior chamber was filled with pus in which I used methyl-violet with excellent results, clearing the chamber in a few days In phlyctenular keratitis I have repeatedly used it with most satisfactory results I have been disappointed in its use where it was most recommended by Prof Stilling, viz in most affections of the conjunctiva I have found it most useful in the affections of the uveal tract and of different intra-ocular affections

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QUIESCENT FOREIGN BODIES WITHIN THE EYEBALL WITH A REPORT OF CASES

Read before the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association at Milwaukee

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When the eyeball has been penetrated by any extraneous material the resulting injury and probable subsequent irritation and inflammation is always regarded with the utmost concern by the surgeon in attendance Even if the particle comprising the foreign body is very minute, if the impact has been sufficient to cause it to penetrate the walls of the eyeball and it has passed within the globe, it is a grave and serious condition The prognosis is nearly always unfavorable, as it may immediately become a source of severe suppurative inflammation resulting in destruction of the eye, necessitating its enucleation, or if allowed to remain may eventually result in disease of the injured eye, or possible sympathetic irritation and inflammation of the fellow eye Should a foreign body have entered the globe and only a moderate inflammation result, the question of its possibly becoming encysted and remaining quiescent, presents itself for consideration, and unless the location of the injury and the position of the foreign body should preclude the possibility of strenuous efforts resulting in a successful termination, or delay should endanger the fellow eye, all eyes should be given an opportunity to become quiet

The eye should be treated in all cases of foreign body with antiphlogistic medicines and applications, and general medications should be administered, when indicated, the object to be attained being the preservation of the eyeball even though it is almost certain that the eye will be sightless Should the possibility exist of sufficient sight being retained to render the eye of any service to the patient, the efforts to quiet it should be continued as long as there is any probability of the inflammation subsiding, for, a natural eyeball, if not unsightly or a constant menace to the fellow eye is infinitely preferable to an artificial eye which is always a source of discomfort, and even if most carefully matched and constructed, somewhat unsightly, in addition to being a constant expense to the wearer

The question of the possible after effects of a present foreign body is of importance and the many cases reported in which even very small particles of steel have, after years of quiescence, become a source of such severe irritation that the fellow eye has become diseased, or an enucleation of the eye rendered necessary, have had a tendency towards preventing protracted efforts to save eyes which seem to be too severely injured to undergo a satisfactory reparative process If a patient carrying an encysted foreign body can not at any future time be easily reached, or may pass entirely from proper observation in case of subsequent irritation, as, under such circumstances there is a decided objection to the continued presence of a foreign body in the eyeball, the desirability of efforts at its removal by operation or even, if necessary, the enucleation of the eyeball itself should be carefully considered The operation for removal of foreign bodies by the magnet has been performed in a large number of cases, it is, however, only moderately successful It is an extremely dangerous operation and so serious a procedure that it frequently induces severe suppurative inflammation and subsequent loss of an eyeball which might under more conservative treatment have been saved

The time required for an inflammation resulting from the presence of a foreign body in the eye to subside is frequently a matter of great importance, especially to a patient who has himself and others dependent upon his daily labor for their support

In such a case where the time would be too long, extending over a period of weeks and perhaps months before the eyeball would quiet, and if the eye were so severely injured that it would be sightless and there were some danger to the fellow eye, immediate enucleation would be a perfectly justifiable procedure The cases reported are presented for the purpose of illustrating the manner in which foreign bodies may enter the eyeball and become encysted in different localities, remaining perfectly quiescent and apparently no menace to the integrity of the globe, the sight of the fellow eye, and even in some cases the sight of the injured eye itself

Case 1—D F, age 30, Irish, machinist, July 12, while working at his trade was struck in the right eye by a piece of flying steel When first examined he had a severe iritic inflammation and a scar on the cornea temporal side, near the limbus The iritis responded readily to treatment by atropin and a leech The eye quieted and was perfectly comfortable There was no idea of a present foreign body and the patient was confident that there was nothing in the eye He had no discomfort, his vision was normal

September 1—Again applies for treatment stating that one week ago his right eye became red and painful and had a feeling of scratching as if something was in it, with blurring of the sight and severe headaches These symptoms had gradually increased until present time On examination severe inflammation with sub conjunctival infection, and a small black speck on the globe in the temporal region were observed, the foreign body, a small piece of steel, presenting near the limbus cornea in the supra-temporal quadrant was removed with some difficulty as it seemed to be tightly imbedded in the ocular tissues It was one-eighth of an inch in length and very thin and sharp pointed The irritation readily subsided under cold bathing and atropin, the eye became perfectly normal and the vision equally as good as that of the other eye

Case 2—J R, 44, foreign body encysted in iris, May 5, 1893, while working at his trade, machinist, a small piece of steel flew from the hammer and entered eyeball lodging in iris First saw patient Tuesday, May 9 At that time the eye was congested and there was a small white fleck on the iris below Had some pain, he could see well, ordered atropin, the pupil responded readily and the iritis gradually disappeared May 15 Has no pain and very little redness, his eye feels well, ordered him to remove bandage and wore shade glasses Atropin was discontinued and on May 22 there is no redness The pupil is coming down and the foreign body is evidently encysted being covered with a white exudate There is a very slight indentation on the edge of the pupil above the body, the vision is normal

Case 3—P W, steel in eyeball, one week before he applied for treatment while working at his trade, a machinist, a piece of steel flew and entered the right eyeball passing through the cornea and iris just below the pupillary margin and through or into the lens The steel can not be seen either by direct illumination or with the ophthalmoscope The lens is somewhat opaque and presents a glistening reflex The pupil is slightly dilated, the tension of the eyeball very slightly increased, has had slight pain, but there is no discomfort at present and no inflammatory symptoms The vision was 1-10 three weeks after the injury and on last advice had remained practically the same since time of injury until his death three months ago, never having caused him any discomfort, either in the injured or the fellow eye

Case 4—F G applied for treatment of an iritis, which he stated he thought might be the result of a foreign body which entered the eyeball twenty years before this time, he complained that he had on several occasions had attacks similar to the present inflammation, the pupil dilated considerably under atropin but was irregular On the temporal side there was an iridodialysis which could be readily illuminated, and directly behind the opening there was upon the fundus a large, white plaque about the size of a pea The vision in the eye was impaired being about 1-20 The iritis responded to treatment and the patient passed from observation still carrying the foreign body

Case 5—J F, age 47 Seventeen years ago received an injury from flying steel in the right eye, the steel passed into the globe in the ciliary region on the temporal side of the eye The sight was immediately lost and never returned There was no opacity of the lens and no spot or plaque could be seen on the fundus to indicate situation of the foreign body He has had occasional attacks of neuralgia in the right eye but never any inflammation He was myopic before the injury, but the sight of the left eye has never been affected as a result of the injury On Thursday three days ago he had a severe attack of neuralgia in the left eye which was the first he ever had in that eye On examination there was no apparent disease of that eye R V O L V = 20-100 with — 1-15 = 20 20

Case 6—W P, age 30, machinist One month before presenting himself for treatment and while engaged in turning on a power lathe, a spicula of steel flew from the tool striking him in the right eye, and as he thought falling to the floor He had no pain redness or swelling and did not notice any feeling of discomfort at any time until the third day after the injury, when he thought that his sight in the right eye was diminishing slightly, from that time until date of first visit one month after the injury there has been absolutely no symptoms present, except a continued falling off of the vision in the injured eye R V = 2-7 No improvement with glasses L V = 20 20 By ophthalmoscopic examination and direct illumination a small piece of steel about the size of a pin head is observed situated in the lens above and towards its supra-temporal border, directly in front and somewhat below this point a corneal scar indicates its point of entrance, the loss of vision is due to opacities of the lens September 15, 1884 The eye has given him no discomfort but the vision has steadily diminished until present visit when he only had perception of light The lens is entirely cataractous and milkwhite in color June, 1893, on examination R V = 20 15 with + 1 3 1-2 The lens is entirely absorbed, the fundus on ophthalmoscopic examination is seen with perfectness with + 1 4 The foreign body can not be discovered it probably having sunken down close behind the iris He never has had any discomfort of any kind and reports the eyesight in his injured eye of great service in discerning objects appearing on that side

Case 7—C A, age 44 While hunting on Oct 29, 1882, and one hour before presenting himself for treatment he received a wound in the right eye, scattering shot from the gun of a companion having struck him The shot used was bird shot No 6 It grazed the upper lid and entered the eyeball just at the limbus of the cornea leaving a small crescent shaped cut upon the globe There was a considerable hemorrhage into the anterior chamber There is but little swelling or irritation Ordered atropin and cold water bathing R V = perception of light October 30 on the day following the injury, R V = ability to count fingers at 6 degrees A new sub conjunctival hemorrhage has occurred near the wound The hemorrhage in the anterior chamber and also the sub conjunctival hemorrhage were gradually absorbed, the slight inflammation subsided and the vision improved, the patient remaining under treatment for two weeks When an ophthalmoscopic examination could be made no foreign body was located, there was a small plaque on the fundus in a direct line with the wound in the globe anterior and the possibility of the shot having passed entirely through the eye presented itself for consideration The vision was still impaired when the patient ceased his visits

July 24, 1891 Eleven years after the injury the patient was sent for and examined with the following result he was unable to say which eye was injured and stated that he could see as well with one eye as the other R V = 20 30 + 1-36 = 20 20 L V = 20 40 + 1-36 = 20 20 He has never had any discomfort since the original inflammation subsided The vision in the injured eye is better than the other eye when not using glasses The location of the foreign body is questionable, it probably having passed through the globe into the orbit behind the eyeball

Case 8—E Q, July 10, 1889, while celebrating the Fourth of July, was struck in the right eye with some powder grains, a cannon having prematurely exploded The grains of powder passed through the cornea and iris and into lens causing a traumatic cataract The eye was still inflamed on July 10 when first seen, it quieted nicely under treatment and by August 2 was perfectly comfortable, although the corneal wound was still open at times and there was an occasional escape of aqueous The lens remained cataractous the wound of cornea closed and the vision was only perception of light There has been no subsequent discomfort May, 1892, when last seen the eye remains sightless

Case 9—J McD, Oct 24, 1887, was struck while working as a laborer in blasting rock, by a piece of steel from a drill, the steel passed through the cornea and sclerotic at the limbus, a well marked inflammation developed with suppurative choroiditis Enucleation was advised, but the patient declined to have the eye removed, after remaining in the hospital five weeks the pain and inflammation had entirely disappeared There was tension of the eyeball and apparently an oncoming phthisis bulbi, there was only perception of light On ophthalmoscopic examination the field presented a semi-organized exudation filling nearly the entire half of the vitreous, evidently the seat of the foreign body, the exudate on last examination still had a reddish tinge resulting from the blood coloring matter not yet absorbed, the eyeball is quiet and comfortable and there is no irritability of the fellow eye The steel can not be seen, being probably concealed in the exudate mentioned above

Case 10—July, 1888, W M, was engaged in firing a cannon on the Fourth of July, the concussion of the ramrod exploded the charge of powder prematurely, he was standing in front of the cannon and the charge shot into his face, filling both eyes with powder and pieces of grass and weeds which he was using as wadding, both eyes were injured and there were dozens of particles of powder and stubs of grass and weeds removed from them The orbital cavity was literally full of such particles, which were lodged in the conjunctiva His left eyeball was severely lacerated, and the right cornea had perforating wounds through which cannon powder had passed The resulting inflammation was so severe that the enucleation of the right ball seemed absolutely necessary, the possibility of saving the left eyeball seemed very slight Under active antiphlogistic treatment the inflammation gradually subsided, there was no light in either eye at first, but ten days after the injury he was able to count fingers with the left eye No sight in right eye which was diminished in tension Present condition, June 1, 1893, phthisis bulbi of the right eye which is considerably sunken and has cicatricial contractions He never had any pain since the original inflammation subsided The left eye has a large symblepharon on the temporal side and is discolored by powder stains, the cornea is clear showing two scars where grains of powder, which are lodged in the iris entered, the pupil is mobile, there are some opacities on the anterior capsule of the lens There is a long narrow choroidal plaque extending from the temporal side of the optic nerve to the extreme limit of the field, undoubtedly due to rupture of the choroid from the force of the blow R V = 0 L V = 20 200, no improvement with glasses He has a sensation of light in the left eye which constantly flitters before the eye either night or day, seen even when the eyes are closed He describes the light as a black center surrounded by moving light, no doubt due to the blind spot in the field of vision caused by the plaque at the seat of the choroidal rupture He was at first troubled with rainbow light flashes, which would circle around and then burst, but as time passed he sees less of these, he thinks his eye is stronger than it was He has no dizziness such as he constantly had for two years after the injury No intolerance of light except in the early morning after working all night, he is employed as a night watchman and has been since the time of the injury

Case 11—July, 1889, W V S, while celebrating the Fourth of July was shot in the eye, the powder passing into the eyeball, penetrating the lens and causing a traumatic cataract, he had a severe iritic inflammation which finally subsided and the eye became comfortable but remained sightless for six weeks after the operation, when he ceased his visits He never, as requested, came back for future examination

Case 12—July, 1892, P H, while celebrating the Fourth of July was shot in the face, a small cannon loaded with blasting powder having prematurely discharged, two grains entered the eyeball and lodged in the lens passing through the cornea and iris The eyeball was excessively inflamed and the pupil contracted, the lens cataractous and a considerable deposit of plastic materal in the field of the pupil The inflammation subsided after six weeks of treatment and he was discharged with a fairly comfortable eye, his vision was only perception of light He passed from under observation never returning for examination

Case 13—W C, while celebrating the Fourth of July a cannon loaded with blasting powder was discharged by a companion and the powder entered the left side of face and eyeball, passing into the chamber of the vitreous At first there was but slight irritation and the vision was 2-5, the grains of powder which could be seen on ophthalmoscopic examination gradually assumed a yellowish cast and increased in size until as large as a mustard seed, they presented a peculiar fuzzy appearance on either direct or oblique illumination The vision was reduced to fingers at eight feet, the inflammation finally subsided, and one month after the injury the vision was ½ There was no further pain or irritation

Case 14—I E, while at work in shop was struck in the eye with a flying piece of steel which entered the eyeball and lodged in the fundus causing a number of hemorrhages, forming a large stellate hemorrhagic spot on the retina He could see one week after the operation to count fingers at twenty feet He was under observation for three weeks his eye having quieted, he was discharged His vision was ¼ He never returned to report the subsequent condition of the eyeball

Case 15—C B, a machinist, while striking a chisel a piece piece of steel flew from the head of his hammer and penetrated the eyeball, passing through the cornea, iris and lens, and lodging in the fundus at a point directly opposite its point of entrance There was considerable resulting hemorrhage into the vitreous and some hemorrhagic spots on the choroid to indicate the point of impact of the foreign body, which could not be positively demonstrated by ophthalmoscopic examination There were no opacities of the lens, although the foreign body had passed directly through it On examination on the day of the injury there was considerable loss of vision, the point of entrance and the course of the body could be demonstrated, the eye pained but little, was slightly red and the pupil did not respond readily to light, the blood in the vitreous somewhat obscured the point of lodgment in the fundus The pupil dilated readily, the inflammation quieted and there was very little discomfort during the two weeks which he remained in the hospital June 2, 1893 Has recently had some neuralgic pain in the injured eye, which has gradually grown blind and he can not on this date see anything but shadows The ophthalmoscopic examination shows the pupil slightly dilated and regular An extensive retinal detachment around the point where the foreign body had lodged, a line of opacity through lens indicating the course of the foreign body The pain in the eye and the complete loss of vision has occurred during the last three weeks, the eye having been comfortable previous to this date Enucleation was advised The vision in the left eye is 20 15, but he states that he has difficulty in locating objects and thinks he can not see as well as he could with the left eye before three weeks ago when the pain and loss of vision occurred in the injured eye

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THE RESULTS OF THE USE OF THE ELECTRO-MAGNET FOR THE EXTRACTION OF FOREIGN BODIES FROM THE EYE, WITH A REPORT OF TEN CASES

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY C BARCK, M D

ST LOUIS

In the history of the use of the magnet on the eye we can distinguish two phases 1, the use of the common magnet, 2, of the electro-magnet The first one dates back as far as two hundred and fifty years ago, when Dr Fabry of Cologne, used a magnet to remove a piece of iron from the superficial layers of the cornea In 1842 Dr Meyer from Minden (Germany), used a magnet, carrying thirty-two pounds, to remove a piece of steel out of the interior through the scleral wound The first one who made a section through the sclera in order to remove a piece of steel with a magnet from the vitreous was Dr McKeown of Belfast in 1874 In 1875 Hirschberg of Berlin, made a similar trial without result These are the instances of the use of the common magnet we find in literature

The second phase begins with the construction and introduction of the electro-magnet by Hirschberg in 1879 Since this time its use has become universal and the literature on the subject quite extensive In the instrument made by McIntosh, although more neat than the ones I have seen abroad, I found it necessary to have the points made somewhat longer The battery must be powerful enough to enable the magnet to carry at least half a pound, and lately even a much stronger current has been recommended

The cases in which the use of the electro-magnet is indicated, can be divided in two categories according to the location of the foreign body in front or behind the posterior lens-capsule Those of the first, comprising the minority of the cases, are and have been within our reach by the ordinary methods, removal with forceps or other instruments, iridectomy, extraction of the traumatic cataract enclosing the body But the extraction with the electro-magnet is easier, more rapid and we can for instance remove foreign bodies situated upon or in the iris without mutilating this organ

All the cases where the foreign body penetrated beyond the posterior lens-capsule, were formerly considered beyond the scope of conservative treatment This is the special sphere of the electro magnet For the scleral incision I used at first Graefe's knife but prefer now a Beer's knife, which makes at once a section of the proper length I thrust it directly through conjunctiva and sclera in the direction of the supposed location of the foreign body, making a kind of pathway in the vitreous too The selection of the point of incision depends entirely on the calculated seat, on the determination of which I shall dwell later The external muscles must of course be avoided The loss of vitreous is exceedingly small, if there is no improper manipulation, frequently none at all Hirschberg recommends chloroform-narcosis I have operated in a number of instances under cocain and find it just as expedient as for cataract extraction, children excepted

The results are divided by Hirschberg into

1, Good results, with maintenance of good vision, 2, moderate results, some vision being saved, 3, preservation of the eyeball, 4, failures

The result depends upon

1, The size and weight of the foreign body, 2, its septic or aseptic condition, 3, the correct diagnosis as to the location

Ad 1—The foreign body can be called small when its weight is below 30 mgrs Here the removal even quite a time after the injury might be crowned with a good result If of medium size, weighing between 30 and 150 mgrs, then a primary operation only, within the first twenty-four hours will be successful If the weight of the entering body exceeds 150 mgrs, the damage done to the structures of the eye will be too extensive to save some vision, sometimes even the preservation of the eyeball is impossible

Ad 2—If the foreign body has been septic, suppuration of the vitreous sets in within twenty-four to seventy-two hours after the injury and the operation can then of course not prevent the loss of the eye The possibility of such a condition is an indication to operate as early as possible

Ad 3—The diagnosis must ascertain the presence of a metallic body in the vitreous and furthermore if possible its location This depends mainly on the transparency of the media, especially of the lens and this again on the time which has elapsed since the injury In the rarer instances where the foreign body enters through the sclera so far equatorial as not to injure the lens, it is of course less important As long as the media are clear, we can diagnose after dilatation of the pupil, the foreign body and its seat with the ophthalmoscope

A precise idea of the situation is most important The advice to operate under guidance of the ophthalmoscope is correct theoretically but deficient practically I had a small mirror made to fit into the head band for the otoscopic reflector but abandoned its use In the calculation of the seat first the meridian is determined Then the distance from the corneal margin is measured upon the basis first, that the most extreme point of the fundus, we can see, is about 8 mm distant from it, second, that every optic disc diameter corresponds to 1½ mm Furthermore an examination with the perimeter serves to control the calculation The scotoma, caused by the presence of the foreign body, is transferred to the retina according to the measurements laid down by Donders in Graefe's Archives (Vol xxiii, 2, pp 255)

It is different, if we see the cases for the first time some days after the injury when the lens has become more or less opaque In moderate degrees we might still discern the deeper seated opacity, extravasation of blood or metallic reflex After the lens has become totally cataractous this is impossible and our judgment of the probable seat rests then upon the anamnesis and especially the direction of the successive wounds in the cornea, iris, anterior and posterior lens capsule The best results are obtained in cases which are operated upon within the first twenty-four hours Moderate results are due partly to the injury done to the retina and choroid, especially where the foreign body happened to strike the region of the macula lutea, partly to opacities of the vitreous Too much fishing in the vitreous with the magnet is always detrimental to the sight, causing shrinking of the vitreous and detachment of the retina They are the cases of the third class, where the eyeball only is preserved But even this result is a gain as many people regard the loss of an eyeball as a serious mutilation

The failures are due to

1, Too large a size of the entering body, 2, a septic condition of it, 3, the impossibility to remove the foreign body because the magnet did not find it or because it was too firmly imbedded in the walls of the fundus

Eyes where operations in the vitreous have been performed should be kept under a close and long observation Hirschberg rightly insists that no statement as to the final result ought to be accepted until at least one year after the operation has elapsed I, therefore, report only my first ten cases, omitting three occurring during the last year In two the foreign body was located in the anterior half of the eyeball

Case 1—M B, 22 years old Injured two days previously In the left eye a fine scar in the cornea below and somewhat in the pupillary area In the outer inferior quadrant of the iris, near to the pupillary margin, a small metallic body could be clearly recognized by focal illumination It was imbedded in the tissue, a small portion of it projecting Pupil irregularly contracted Under cocain, corneal section downward and outward The introduced magnet attracts the piece at once and brings it forth After atropinization, the anterior lens capsule was found intact Normal healing with a round movable pupil Vision 20 30, owing to the cicatrix involving the pupil Without the magnet this case would most probably have required an iridectomy

Case 2—L O 41 years old Injury same morning Right eye Corneal cicatrix two lines long outward Corresponding perforation visible in the iris One-third of anterior chamber filled with blood After repeated use of atropin during two hours, pupil sufficiently dilated A black dimly reflecting foreign body could be diagnosticated in the outer half of the crystalline lens Expectative treatment during three weeks, after which time the lens was sufficiently opaque Iridectomy upward and outward The piece of steel follows easily the introduced magnet Removal of the cataract as usual Normal healing Secondary cataract operation later Final result, vision 20 70 with + 11 0D In this case, the same result could have been attained by the ordinary method The use of the magnet seemed to me of advantage

In the other cases the foreign body entered the vitreous chamber I shall give them in chronological order

Case 3—L M, 30 years old While striking the back of a hatchet with a hammer, the day before, a piece struck his right eye Pain in the night Eye moderately injected In the upper outer quadrant of the cornea a linear cicatrix one half line long After atropinization, a corresponding wound in anterior lens capsule near the æquator was seen The ophthalmoscope reveals, if the patient looks down, a roundish opacity in the vitreous with a metallic reflex from its center, apparently not far behind the posterior lens capsule Fundus otherwise clear Operation same day under cocain Scleral section between superior and external rectus On the third introduction of the magnet it brought forth a minute piece of iron No loss of vitreous Conjunctival suture Healing process normal without pain and very little irritation Vitreous at first cloudy, then clearing up Traumatic cataract did not follow Dismissed the 15th of December No injection of eyeball Vision = 20 40 On the place of the foreign body an irregular opacity of vitreous with corresponding narrowing of the visual field Status the same two years later

Case 4—Young man from the country, seen in consultation with Dr Williams of St Louis Chip of iron had entered the eye two weeks previously Traumatic cataract Fundus not visible Scleral section between inferior and external rectus The foreign body could not be found with the magnet The eye was afterwards enucleated by Dr Hotz of Chicago

Case 5—L S, 27 years Injury three hours previously while working on the rim of a barrel Right eye In the inner lower quadrant of the cornea a closed wound one line long In the same direction in the iris an oblong perforation reaching close to the pupillary margin Pupil dilated after one and a half hours Wound in anterior as well as in posterior capsule and the way of the foreign body through the lens in form of an opaque streak clearly visible In the vitreous near to the retina a gray-yellowish, sharp circumscribed opacity the size of the optic disc From the center, a metallic reflex Operation same morning in narcosis Incision with a Graefe's knife in inner lower quadrant 3mm long On the second introduction of the magnet the metallic body springs to it with a loud click and is easily extracted Weight, 15 mgrs Healing of the wound regular The development of the traumatic cataract caused for a time glaucomatous symptoms After its resorption the eye was found blind in consequence of detachment of the retina

Case 6—Young man, seen November 1889 Injury three days previously Corneal wound Lens nearly totally opaque so that nothing of the fundus could be seen In the grayish lens substance there is a sharply circumscribed black spot which looks like a foreign body On the ground of the possibility of this location the section was made in the cornea The introduced magnet proved the fallacy of this supposition and it was then introduced deeper through the lens into the vitreous The foreign body could not be found The patient did not return, and I do not know what became of him The eye must of course be counted as lost

I would like to mention here that a small oblong transparent portion in an otherwise opaque lens looks just like a foreign body, and is highly deceiving The only difference is the presence or want of a metallic reflex If this is wanting the location of the foreign body should always be supposed to be in the vitreous chamber and the scleral section ought to be made

Case 7—O R, 40 years old Right eye received injury seven days ago Horizontal scar in upper inner quadrant of the cornea one and a half line long Behind it, perforation of the iris Lens nearly completely opaque, but the wound canal from anterior to posterior lens capsule and in a downward direction plainly visible Farther back in the vitreous there is a dark spot with slightly metallic reflex just perceptible Location of it impossible Operation the next day under cocain Owing to external circumstances I decided to remove in the same operation the cataract and entered therefore with the magnet, after a corneal section downward and extraction of the cataract through the pupil I proceeded the same way in Case 9 But although the result in this case was favorable I can not recommend the procedure It is much more difficult to manipulate with the magnet from a corneal than from a scleral incision, and the extraction of the cataract ought to be left to a subsequent operation The foreign body was found after some searching on the bottom of the vitreous and removed Weight, 10 mgrs The healing process was a regular one with very slight symptoms of irritation A discission of the capsular cataract on March 1 1891, produced a round pupil in the center Fundus clear, only fine opacities in vitreous Vision = 20 40 with + 12 0D Reads Snellen III with + 15 0 This status has been the same up to date As the other eye of the patient had been considerably injured by a previous accident (vision only 20 200), this one enabled him since to do his work and earn his living

Case 8—R L, aged 28 Injury received six weeks previously in the country A large piece of iron from a chisel had entered the eye Large cicatrix at cornea-scleral margin Traumatic cataract Iris dull and discolored Chemosis Swelling of the upper lid The other eye injected, pronounced photophobia As the patient was very anxious to have his eye saved, a last resort was made in spite of the symptoms of commencing sympathetic affection of the other eye Scleral section From the vitreous there was attracted at once a large piece of iron, necessitating enlargement of the wound in order to remove it Weight 630 mgrs There was some pus on its surface On that account, and as the sympathetic symptoms rather increased, the shrunken eye was removed two days later Under appropriate treatment the other eye recovered fully

Case 9—J P, 52 years old Piece of steel from a chisel entered the eye five days previously Large irregular horizontal cicatrix in cornea not fully closed as yet Anterior chamber shallow Pupil dilates only partially from atropin Lens opaque Place on laceration in anterior and posterior capsule recognizable, no reflex from fundus The foreign body had most probably caused a considerable hemorrhage I deemed it best in this case to proceed as in Case 7, especially as the corneal wound had not united fully I, therefore, reopened and enlarged it, removed the opaque lens masses, and entered with the magnet through the pupil In spite of long searching the foreign body could not be found The patient disappeared a few days afterwards

Case 10—J D, 14 years old A piece of steel from a plate, crushed by a large hammer, struck the right eye Seen immediately after the injury Corneal cicatrix in outer lower quadrant Triangular wound in iris, which is slightly adherent to the cicatrix After atropinization, wound in anterior and posterior lens capsule visible Ophthalmoscope reveals at the bottom of the vitreous an opacity with metallic reflex Fundus otherwise clear Operation three hours after injury in narcosis Scleral section between inferior and external rectus The click on touching the foreign body was heard twice, but it followed the third introduction only, having probably been firmly sticking in the sclera with its very sharp end Weight 10 mgrs Loss of one drop of vitreous Conjunctival suture Healing process normal Traumatic cataract left to absorption Discission August 1892 Vitreous considerably cloudy, especially in lower portion, and most probably retinal and choroidal atrophy Counts fingers at 1½ meter distance Status about the same now It is doubtful if this moderate amount of vision will not become lost in the future

The eight cases of extraction from the vitreous give the following results

Two, good ones 1, moderate one, 1, preservation of the eyeball, 4, failures

The most extensive experience on this subject is possessed by Hirschberg, who reported (Graefe's Archives, 1890) a series of 100 consecutive cases from 1879–90 Among them in forty-one, the foreign body was situated in the vitreous chamber and his results were

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His failures were in a large percentage of the cases due to septic infection already existing at the time of the operation.

Another large collection of cases has been reported by Mayweg (Archives of Ophth., xxiii, p. 278). In fifty out of sixty-six the seat was in the vitreous chamber. His results were:

Nine, good ones, 7, moderate ones, 6, preservations of the eyeball, 22, failures.

In six the final result unknown. From the literature at my command, I could collect up to 1892 258 cases, including the above mentioned series. The results of these were:

Fifty-eight, good ones; 40, moderate ones, 37, preservations of the eyeball, 123, failures.

The pronounced difference between these statistical results and those of Hirschberg is striking, but easily to be accounted for. These cases have been reported by numerous different authors, one or a few at the time and many of them beyond doubt too early. Furthermore, good results are published, as in surgery generally, failures passed over in silence. Therefore but little value can be attached to such collected statistics, and in my opinion only a larger number by one operator, or series of such, can form the proper basis to guide us. If the results so far have not been brilliant they have nevertheless been encouraging and they will undoubtedly become better with our increased experience.

DR. J. L. THOMPSON—The first paper was a very valuable one on the use of the electro magnet for the purpose of extracting foreign bodies from the vitreous. As to the second one, concerning quiescent bodies, we should like to have heard the last of that paper; without that we can say very little about it. Patients should be repeatedly warned by their physicians as to the danger of these foreign bodies. Tell them of the danger of the foreign body setting up inflammation many years afterwards. In such cases I have always given Solon's advice to Crœsus: "Count no man happy until he is dead." There are some physicians who let the poor creatures go on with the injuries telling them: "Well, there is not much danger," until the patient goes on and loses the other eye. If the doctor had told him of the danger he would have been more practical and saved his eye.

DR. BAKER—I had the pleasure in 1882 of spending some months with Prof. Hirschberg in Berlin and seeing him make several attempts at extraction of foreign bodies from the eyeball with an electro-magnet. On my return home in 1883 I had a magnet made, an improvement on his, in that it would lift five or six pounds while his would lift only ten or fifteen ounces. We have in Cleveland, as in all manufacturing centers, a number of penetrating wounds of the eyeball. It is always a difficult problem to know how to treat these cases, and the electro magnet has been of much value to me in making a diagnosis. In a few cases it has proved of great service in the removal of fragments of iron or steel from the interior of the eyeball.

I recall one case referred to me by the late Dr. Weed in which he supposed the injury was only conjunctival and put a stitch in it; there was hemorrhage in the anterior chamber which obstructed the view with the ophthalmoscope. As soon as I brought the electro-magnet near the eyeball I knew there was a foreign body in it by the way in which the ball followed the magnet, and the pain complained of by the patient. I opened the wound and by the aid of the magnet soon found and removed the piece of steel, which was about the size of my little finger nail. The man is still carrying the eye without any vision, but it looks as well as the other. In another case I could see a piece of something, not much larger than a pin head, very distinctly in the center of the vitreous. I made an opening in the chamber opposite and inserted my magnet repeatedly. I could hear the click of the instrument against the foreign body but it would not come out. I kept this up for a long time but could not get it. After consulting with the patient we decided the eye must come out. I enucleated the eye and upon opening it took the magnet and placed it in contact with the foreign body but could not extricate it. I could lift the entire eyeball with this piece of steel adhering to the magnet, and yet it would not separate from the vitreous. The inflammatory capsule held this piece of steel there. Could I have permitted that foreign body to remain without harm? I had another case not very long ago who had a piece of steel in his eye eight years; after that long time of quiescence it set up sympathetic inflammation and caused the loss of the fellow eye. I do not like the term, "quiescent foreign bodies in the eye." I do not think it best to convey the idea to the mind of the general practitioner that he can safely leave these foreign bodies in the eye. It might do if we could have them under our own control, but it is not well for us to let patients go from under our care with these foreign bodies in their eyes.

DR. MURRELL—I had occasion to present a paper last year on the subject of sympathetic troubles and how to deal with them. In reference to the first paper I will say that my experience with the electro magnet has not been satisfactory. I have tried it in a few instances and have always failed to save the eye. The foreign body is usually tangled up in the fibers of the vitreous. I have had two or three typical cases and in each have failed and had to remove the eye afterwards. In reference to quiescent bodies in the eye, I think it is a very dangerous thing to leave them in position. Of course, we know that injuries in uveal tract are most liable to give rise to sympathetic trouble, but even in the vitreous humor there is danger of sympathetic trouble following if the foreign body can not be removed from the eye. I have seen a number of cases where foreign bodies have been carried a number of years and then have sympathetic inflammation set up in the other eye. I treated an eye with a piece of glass in it that had been carried for ten years. The piece of glass measured more than half an inch and had very sharp edges, sharp enough to cut. It had cut transversely through the cornea into the sclera about four millimeters on either side. It was evidently in the ciliary body, yet it was carried ten years without the slightest trouble. However, I advised the removal of the eye because the patient was blind and as a safeguard. On opening the eye I found the piece of glass. As Dr. Thompson has said, the patient was better without the eye, in his judgment, than to run the risk of carrying it.

DR. JACKSON—The case reported by Dr. Baker in this discussion brings out a feature I do not remember to have seen mentioned, as to the use of the magnet in extracting foreign bodies from the vitreous. A foreign body can be dragged through the vitreous with very great difficulty or not at all by the magnet, unless you drag it through the wound of entrance. In one case I saw the patient thirty-six hours after the foreign body (quite a small particle of steel) entered the eye. The wound of entrance being small and the foreign body lodged on the other side of the eye a wound was made at the outer side of the vitreous chamber. Inserting the magnet, which was working well, it was tried repeatedly to drag the body out. The instrument would come in contact with the foreign body but it was impossible to dislodge it. So in Dr. Baker's case he tells me he had chamber filled with blood After repeated use of atropin during two hours, pupil sufficiently dilated A black dimly reflecting foreign body could be diagnosticated in the outer half of the crystalline lens Expectative treatment during three weeks, after which time the lens was sufficiently opaque Iridectomy upward and outward The piece of steel follows easily the introduced magnet Removal of the cataract as usual Normal healing Secondary cataract operation later Final result, vision 20-70 with + 11 OD In this case, the same result could have been attained by the ordinary method The use of the magnet seemed to me of advantage

In the other cases the foreign body entered the vitreous chamber I shall give them in chronological order

Case 3—L M, 30 years old While striking the back of a hatchet with a hammer, the day before, a piece struck his right eye Pain in the night Eye moderately injected In the upper outer quadrant of the cornea a linear cicatrix one-half line long After atropinization, a corresponding wound in anterior lens capsule near the æquator was seen The ophthalmoscope reveals, if the patient looks down, a roundish opacity in the vitreous with a metallic reflex from its center, apparently not far behind the posterior lens capsule Fundus otherwise clear Operation same day under cocain Scleral section between superior and external rectus On the third introduction of the magnet it brought forth a minute piece of iron No loss of vitreous Conjunctival suture Healing process normal without pain and very little irritation Vitreous at first cloudy, then clearing up Traumatic cataract did not follow Dismissed the 15th of December No injection of eyeball Vision = 20 40 On the place of the foreign body an irregular opacity of vitreous with corresponding narrowing of the visual field Status the same two years later

Case 4—Young man from the country, seen in consultation with Dr Williams of St Louis Chip of iron had entered the eye two weeks previously Traumatic cataract Fundus not visible Scleral section between inferior and external rectus The foreign body could not be found with the magnet The eye was afterwards enucleated by Dr Hotz of Chicago

Case 5—L S, 27 years Injury three hours previously while working on the rim of a barrel Right eye In the inner lower quadrant of the cornea a closed wound one line long In the same direction in the iris an oblong perforation reaching close to the pupillary margin Pupil dilated after one and a half hours Wound in anterior as well as in posterior capsule and the way of the foreign body through the lens in form of an opaque streak clearly visible In the vitreous near to the retina a gray-yellowish, sharp circumscribed opacity, the size of the optic disc From the center, a metallic reflex Operation same morning in narcosis Incision with a Graefe's knife in inner lower quadrant 3mm long On the second introduction of the magnet the metallic body springs to it with a loud click and is easily extracted Weight, 15 mgrs Healing of the wound regular The development of the traumatic cataract caused for a time glaucomatous symptoms After its resorption the eye was found blind in consequence of detachment of the retina

Case 6—Young man, seen November 1889 Injury three days previously Corneal wound Lens nearly totally opaque so that nothing of the fundus could be seen In the grayish lens substance there is a sharply circumscribed black spot which looks like a foreign body On the ground of the possibility of this location the section was made in the cornea The introduced magnet proved the fallacy of this supposition and it was then introduced deeper through the lens into the vitreous The foreign body could not be found The patient did not return, and I do not know what became of him The eye must of course be counted as lost

I would like to mention here that a small oblong transparent portion in an otherwise opaque lens looks just like a foreign body, and is highly deceiving The only difference is the presence or want of a metallic reflex If this is wanting the location of the foreign body should always be supposed to be in the vitreous chamber and the scleral section ought to be made

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Dr Allport—In regard to the use of the electro-magnet my experience has been rather unfortunate I have upon several occasions extracted foreign bodies from the interior of the globe by the use of the magnet, but have subsequently lost the eye The intra ocular manipulation of the instrument has seemed to be more than the eye could endure I would not, however, condemn the use of the magnet Good results are reported and I may have been unskillful in the operation It should certainly be used in superficial lodgment of foreign bodies that are beyond reach by other methods But I should have to be absolutely *sure* of the presence of a foreign body inside the eyeball to make any more experimental intra-ocular searchings with an electro magnet

In regard to quiescent foreign bodies in the eye I feel convinced that there is no safety while a foreign body is in the eye, and that if its extraction is impossible the eye should be removed There are eyes that carry foreign bodies for years and thus produce a loss of both eyes It is not conservative practice to allow patients to take such chances These patients are usually laboring people of a low order of intelligence, and are apt to wander from one part of the country to the other A sympathetic inflammation is liable to occur at any time under the most adverse circumstances as to skilled surgical attendance, etc The loss of one or both eyes will be the probable result We should do our duty and advise the enucleation of an eye, when we are sure of the presence of a foreign body before the patient passes from under our observation In this connection let me advise some concerted action with regard to enforcing legislation calculated to prohibit the manufacture and sale of toy guns and pistols In the month of June I was compelled to remove no less than three eyes from children who had been playing with these mischievous playthings During the same month a medical friend of mine in Winona, Minn , was forced to mourn the loss of a young son, killed while playing with one of these dangerous instruments If our wise legislators could drop for a time the discussion of such burning subjects as the smoking of cigarettes, the draping of nude statues, the covering of similar pictures, and the wearing of hoopskirts, and direct their attention to the advisability of permitting the manufacture and sale of toy guns and pistols, they would fill a longfelt want

Dr Frothingham—I wish to discuss briefly two points that have been presented The first is a statement that has been made by a previous speaker, that if a foreign body has entered the eye and we can not remove it we should enucleate the eye at once without regard to other conditions I do not think experience warrants so 'hard and fast" a rule as that While in the great majority of cases enucleation will be necessary sooner or later, we should not decide the question of enucleation alone upon the fact that a foreign body is lodged within the eye, but upon the amount of injury and the reaction that follows, that is, upon the symptoms of an inflammatory nature in the injured eye that indicate danger to the other eye through sympathy We all know that foreign bodies may remain in the eye for years without causing any feeling of discomfort or endangering the other eye I once had a patient, an aged gentleman, who suffered from senile cataract Many years before, while he was a young man, he had a piece of steel enter the eye and lodge in the upper portion of the iris, where it had become encysted, and after a brief period of irritation had never troubled him in the least, and the vision had remained perfect until the senile cataract commenced to form As the cataract was mature in this eye I operated, and in removing the usual section of the iris I removed the foreign body also There are many instances where foreign bodies have remained in the deeper structures for many years without producing any symptoms that indicate enucleation of the injured eye I had a patient a young man, suffering with pain in a blind eye, and sympathetic irritation of the other The painful eye had been blind from childhood, but until a short time before consulting me it had caused him no discomfort There was an injury of the iris, an absence of the lens, and a small scar of the cornea which indicated that a foreign body had penetrated the eye long before He was then twenty-six years of age and said he had never received any injury of the kind The eye was enucleated and a small piece of steel was found lodged upon the inner surface of the sclerotic The patient afterwards recalled the fact that when a small boy, about six years of age, he was watching some men while they were drilling a stone, and that something struck him in the eye causing pain This was a case where a foreign body had penetrated the eye, and yet, not until about twenty years afterward did it give rise to symptoms that called for its enucleation This patient made a perfect recovery Now there are a sufficient number of similar cases on record to forbid our acceptance of a rule that we should enucleate an eye at once if a foreign body has entered it, and we can not remove that body If all symptoms of irritation speedily subside and there is no recurrence of pain or feeling of discomfort in the injured eye and the other is unaffected in any way we are justified in waiting, and under certain circumstances should wait until symptoms of pain and irritation recur in the injured eye and indicate danger to the other through sympathy We should never allow a patient to go without warning, and should fully impress him with the danger of delay after symptoms of irritation recur in the injured eye, and in all cases where the recovery from the effect of the injury is not steady, and of short duration, we should enucleate

I remember a case something like this one reported by Dr Baker the patient, a man of intelligence, had a small bit of steel penetrate his eye a few months before I saw him The vision of the eye was not greatly impaired and there was on first examination but little indication of irritation or danger to the other eye, and I thought the patient was perhaps unduly alarmed, I hesitated to sacrifice an eye that possessed so good vision until thoroughly satisfied that it was necessary Upon ophthalmoscopic examination the position of the foreign body could be plainly made out in the posterior portion of the vitreous humor, where it seemed suspended and surrounded by a thin film of semi-transparent tissue I kept the patient under observation in the hospital, and finding that there were well marked symptoms of irritation at times which prevented his use of the other eye I decided to make an attempt to remove the foreign body, and failing in this to enucleate the eye Having the patient's consent, I had him put under the influence of an anesthetic, and making the usual incision tried with a powerful magnet to extract the foreign body but without success I then enucleated the eye which I opened, with the foreign body plainly in view and the magnet brought as close as could be I was unable to move it, although there seemed but a slight change in the vitreous surrounding the metal

Dr LeMond—I do not think there is anything more in keeping with conservative ophthalmology than to enucleate the eyeball if any sympathetic irritation is present. A few days ago at my home in Denver on the day I was preparing to start for Milwaukee, a gentleman came to my office who had an injured eye. The ocular injection was very great and inflammatory action had gone to a considerable extent. The well eye I noticed, on examination, was wanting quite a little in power to accommodate. He said to me "I came to get some medicine for my eye." I examined it carefully and found that it had been caused by the introduction of a foreign body. I told him he was running a considerable risk in allowing the affected eye to remain in its orbit and assured him that he had a sympathetic irritation in the well eye, which was likely to produce total blindness unless attended to at once. The affected eye looked phthisical, was minus tension and the vision was entirely gone. I said "I will enucleate the eye for you, if you want it done, otherwise I will do nothing." He went away but soon returned and informed me that he would take my advice and have the operation performed. On opening it I found the remains of a foreign body.

About three years ago lady came to my office and said "Doctor, I have come to get something to allay this inflammation in my eye." It had never given her such trouble before. It was brought about by the introduction of a small piece of thorn having pierced the ciliary body. I told her I would enucleate the eye by all means, as she was beginning also to have sympathetic trouble in the well eye, and that I could not be honest in advising her to try to hold on to the injured eye longer, as it would be running a risk that I would not carry for a thousand dollars a day. She refused to abide by my advice and went away and the sequelæ will tell the result: in three months she returned, and I found that the injured eye had recovered, to a great extent, from the introduction of the foreign body, but on examining the other eye, alas! I found it too was in total darkness. Had I advised this woman at her first visit to me to have pursued the course she did, my conscience would haunt me to this very hour for not doing my duty. I do not say to do a wholesale enucleation for every foreign body—far from this, if sympathetic inflammation has manifested its presence I never fail to advise enucleation, and I have got the first case to regret for having taken such a course. I do not think we act wisely by attempting to carry these risks. This case is only one of a dozen or more that has come under my own observation with like results.

Dr. Hotz—called attention to the fact that prognostically it made a vast difference whether the foreign body in the eyeball was lodged in the vitreous, or in the lens, or in the iris. General statements therefore on foreign bodies in the eye without mentioning the location must be misleading; for instance, when a gentleman said it was his rule to take any eye out in which he found a foreign body, he certainly did not wish us to believe he would enucleate eyes having a foreign body in the iris or lens, for these foreign bodies may be either left in situ or can successfully be removed and the eyeball saved. But conservative treatment can not be recommended for foreign bodies in the *vitreous*. The experience of all oculists, at all times, has been that foreign bodies in the vitreous are a prolific source of sympathetic inflammation. Such eyes are a constant menace to their fellows and should be removed, for we have no right to jeopardize the sight of thousands of eyes by a conservative treatment, because in some rare exceptions it has proved satisfactory. We must not be guided in our actions by what our experience of every day shows to be the usual course with such patients.

Prof. Zehender (by invitation of the chairman) called attention to the experiments of Kries and Haab with electro magnets of unequal strength for the extraction of iron and steel from the eye without entering the eyeball, but by magnetic traction through the tunics. He has observed two cases operated on in this manner by Dr. Schloesser of Munich. In both cases the *extraction* of the iron piece succeeded very well and quite easily, but in one of these cases the piece was so big, that in spite of the extraction the eye was destroyed. He also related an instance in his experience in which he observed at the time the entrance of a foreign body into the interior of the eye in a boy, which was followed by retinal detachment and atrophy of that eyeball, but had not caused any sympathetic trouble in the fellow eye up to the time of his death sixteen years later.

THE ACTION AND SAFETY OF CHLOROFORM.

Being an abstract of a report to Surgeon Lieutenant Colonel Edward Lawrie and the Government of His Highness, the Nizam of Hyderabad, India.

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To any one who endeavors to view the subject of chloroform anesthesia in an entirely impartial light, two objects raise themselves so high above all others that they form the peaks about which the smaller questions must cluster. The first object on which the judicial eye rests is the firm belief of many clinicians that chloroform may cause sudden cardiac death; the second object to be seen is the statement of the Hyderabad Chloroform Commissions that death from chloroform is never due to cardiac failure. In the support of the first belief we have not only wide clinical observation but also the experimental evidences of a number of investigations. In support of the second statement we have an array of experimental study, not equaled by any other research extant, associated with an enormous number of negative observations on man. Negative observations, because Lawrie alone in 25,000 cases has never had a death.

The controversy concerning the action of chloroform upon the animal organism has been waged so incessantly for many years, and has led to such extraordinary efforts for its elucidation and final decision that any one who attempts to take part finds himself swamped by the number of statements and opinions which he is forced to regard. We have, therefore, approached this research feeling it was no ordinary task, and that a path already so well traveled must be gone over with the utmost care if anything new or of value was to be discovered.

In March, 1892, Surgeon Lieut. Col. Lawrie, whose interest in this subject is recognized by the medical profession the world over, wrote to one of us (Hare) asking that another chloroform research be instituted for which the Government of his Highness the Nizam of Hyderabad would pay. The express object of the research was the reconciliation of at least some of the contradictory conclusions reached by various experimenters during the past few years.

From the immense number of observations in regard to the action of chloroform in the laboratory and in the operating room it is evident that sufficient data are at hand to give us material to reach positive conclusions, and that the contradictory results hitherto obtained must have been reached by misinterpretation and error in experimental method, tinctured perhaps by opinions formed previous to the completion of a line of study. There are certain facts in regard to chloroform which few will deny, the chief of which are that it has the advantage of rapid action without disagreeable preliminary or subsequent symptoms, its bulk is small and its odor agreeable but, more important than all, it is much more dangerous than ether.

Though the Hyderabad Commission in their preliminary conclusions (page 30, paragraph 43) assert that ether is as dangerous as chloroform if given sufficiently to produce true anesthesia, we believe that the safety of ether is so universally recognized that this conclusion of the Commission can only be excused by the remembrance that ether has probably been used as little by those who wrote this paragraph as chloroform is used in many parts of America. This possibility is made a probability when we read that "if surgeons choose to be content with a condition of semi-anesthesia, it can no doubt be produced with perfect safety, though with discomfort to the patient, by ether held rather closely over the mouth. Such a condition of imperfect anesthesia would never be accepted by any surgeon accustomed to operated under chloroform." That this statement shows, to put it mildly, that the writer knows not whereof he speaks is proved by the universal employment of ether by hundreds of the best surgeons the world over in preference to chloroform. Further than this, medical literature contains so many statistical papers showing the small percentage of deaths from ether, compared to chloroform, that this point need not be discussed.

There are certain other points in regard to the action of chloroform which may be put aside as settled and therefore not needing further study, being generally received as beyond criticism, and we have made no experiments looking to their reproduction but have devoted our efforts solely to the question over which discussion still proceeds. Thus, all investigators concur in the statement that chloroform, even in ordinary therapeutic quantity, acts as a powerful and constant depressant to arterial pressure. This conclusion has been reached by Bowditch, Minot and Coats, H. C. Wood and H. A. Hare, Gaskell and Shore, the Hyderabad Commission Nos. 1 and 2 and by every experiment in the research now carried out which forms this report. There is no evidence to the contrary and practically it has never been denied. Gaskell and Shore state, however, that chloroform may cause anesthesia without lowering blood pressure and that chloroform causes primarily a rise of pressure. They also believe that the chief cause in the fall of arterial pressure is cardiac and not vasomotor depression. The rise we have never seen except from struggles, and we have never been able to produce anesthesia without lowering the blood pressure, even when the drug was used in the smallest quantity capable of causing anesthesia and given as slowly as possible. We agree with the statement of the Hyderabad Commission that a fall of blood pressure always occurs when chloroform anesthesia is produced.

We are also forced, as the result of our studies, to differ entirely with Gaskell and Shore in their statement that the fall of arterial pressure is due primarily to a weakening of the heart's action and not to paralysis (depression?) of the vasomotor nerves. We believe that both factors cause the fall, but that the dominant factor is vasomotor depression because as will be seen in several of our tracings the pulse waves were quite strong though the blood pressure, through vasomotor relaxation, was absolutely to the abscissa line and we agree with Lawrie that no conclusions as to the action of chloroform when inhaled can be drawn from the injection experiments of Gaskell and Shore into the arteries. One of our reasons for this belief is the entire difference in result. Another reason is that any powerful drug injected into the brain will cause a rise of blood pressure. Even nitrite of amyl, the prince of vaso motor paralyzants, will do this. (See Gaskell and Shore 17, paragraph 68.) We also believe that results obtained by such interesting methods of experimentation as those employed by Gaskell and Shore are not capable of giving positively reliable information, as the conditions are so utterly at variance with those in which chloroform is given to man and, further than this, their methods are such as to give room for fallacious results which can not be excluded by the greatest caution on the part of experimenters experienced as they are.

Secondly, it is not denied by any one, that we know of that chloroform exerts a powerful, depressant, paralyzant action on the respiratory center. This is agreed to by clinicians and by every one who has experimentally studied the action of the drug on the lower animals.

Thirdly, it is universally conceded that chloroform is a lethal agent of great power when brought in direct contact with highly vitalized tissues. Aside from these facts there are a number of others in which we find ourselves strictly in accord with the conclusions of the first and second Hyderabad Commissions.

We find when the drug is pushed that insensibility comes first, then respiratory failure and finally cardiac arrest in every case in the lower animals. In other words, that cardiac arrest never ensues primarily from inhalation of chloroform.[1]

SUMMARY

From a careful study of the experiments so far reported, from studies made by one of us two years ago with H. C. Wood, and finally from this careful series of experiments we believe that the subject can be settled by the acceptance of both views in a modified form, or in other words that there is no real antagonism in the beliefs that chloroform kills by depression of the respiration or paralysis of the heart. We very positively assert that chloroform practically always kills by failure of respiration when administered by inhalation provided, and this provision is most important, that the heart of the anesthetized is healthy and has not been rendered functionally incompetent by fright or violent struggles or, again, by marked asphyxia. By a healthy heart we mean one which has not undergone true fatty degeneration or has not so severe a valvular lesion as to make the slightest variation in the even tenor of the circulation fatal.

As positively as we assert that chloroform kills primarily by respiratory failure, so do we also assert that in excessive dose by inhalation it has a depressant effect on the circulation which is chiefly due to centric vasomotor depression with final depression of the cardiac muscle itself Depression of the cardiac muscle alone is never great enough to cause death when the chloroform is given by inhalation, *but we believe that gradual asphyxia with the direct* depression of the circulation may do much towards producing a fatal result, for vasomotor integrity is *almost as necessary to life as an intact cardiac* mechanism This circulatory depression has been considered a safeguard because it was supposed to prevent chloroform going to the vital centers, but in reality it is no safeguard because profound circulatory depression is as great an evil as respiratory narcosis That the circulatory depression may be dangerous is not only evident, but it is stated to be so by the Hyderabad Commission itself at the end of paragraph No 8 This circulatory depression may be so profound that recovery is impossible, even with the most thorough artificial respiration, a fact stated by the second Hyderabad Commission in paragraph 25, which we quote in this paper This emphasizes the fact that we can not afford to totally ignore the effect of chloroform on the circulation and we can not consider the patient in danger of circulatory failure *only* when the respiration *ceases, but as soon as it becomes abnormal* On the other hand, we should remember that even if chloroform has been given properly, the arterial pressure may be so low as to give no pulse in the radial artery and yet the circulatory system be ready to respond at once when the drug is removed If, therefore, the chloroform is properly administered is there danger of its circulatory effect in man? We think that it is just at this point that our research and every other research on animals fails and necessarily fails, to produce a positive reply The variation in the action of a drug on a diseased individual from its effect on the normal one is notorious, and we have no right to dogmatically assert that there is absolutely no danger of a circulatory depression in man, even if we found no evidence of failure in dogs, because there may be many idiosyncrasies or variations through disease in the human being which may completely reverse the results of experiments on healthy animals

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[1] Lack of space prevents the inclusion of three experimental records. They can be found in the issue of the Therapeutic Gazette for Oct. 15, 1893.

In other words, supposing that the amount of depression from very full doses of chloroform equals 25 units this amounts to little in the normal heart, but if the heart be depressed 25 additional units by disease the depression of 50 units may be fatal particularly if to this 50 is added 25 units more of depression through fright and cardiac engorgement through disordered respiration or struggling That true depression of the heart muscle may take place under chloroform seems to us most undoubted and we think that the tracings in every research that we have seen support this view There is always a decrease in cardiac power manifested by the decrease in the force of the individual pulse beat and this passes away only if chloroform is removed early enough We also agree with McWilliams that from the very first inhalation of chloroform there is a constant tendency to cardiac dilatation

We come finally to the all important questions

1 —Is chloroform a safe anesthetic?

2 —Are we to watch the pulse or respiration during the use of the drug, and what are the signs in the respiratory function indicative of danger to the patient?

3 —What is the true cause of death from chloroform?

4 —Is death from chloroform possible when it is properly administered?

5 —Under what circumstances is the surgeon to use *chloroform in preference to the less dangerous anesthetic*, ether?

6 —What is the best way of administering chloroform?

To the first question the answer is yes, for the majority of cases, provided it is given by one who is skilled in its use and not only knows how to give it but to detect signs of danger It is not as safe as ether at any time, other things being equal, and never safe in the hands of a tyro

To the second question the answer is, watch the respiration, *because as soon as enough chloroform is used to endanger the circulation the respiration will show some signs of abnormality either in depth, shallowness or irregularity* In other words, the very effect of the drug may be to cause such deep and rapid respirations that an excessive quantity of the drug is taken into the lungs and continues to be absorbed even after the inhaler is withdrawn

As there is always a fall in pressure under chloroform it is difficult to feel the radial or temporal pulse and the respiratory center recognizes the degree of arterial depression, which its sister vasomotor center has permitted by finding that its blood supply is insufficient *As respiration fails first it should be watched first* Finally, it is only by watching the respiration that we can tell how much chloroform the patient is getting We do not watch this function for danger alone but to tell us of the dose

The answer to question three is that death is always due in healthy animals to respiratory failure accompanied by circulatory depression, which latter may be severe enough to cause death even if artificial respiration is used skillfully Death only occurs in the healthy animal when chloroform is given in excessive quantities

Question four is impossible to answer for man from the basis of experimentation, as we can not produce identical diseased states in animals with those developed under various conditions in man The physician having a case of heart disease should always advise the patient of the danger of any anesthetic and he should remember, whether it is wise to tell the patient or not, that anesthesia always means a step toward death even in the healthiest of men In the event of a death under chloroform the physician is not to blame if he has taken proper preliminary precautions and given the chloroform properly

Every one is agreed that the patient taking chloroform should have plenty of fresh air and in India we understand that to all intents and purposes patients are operated on in the open air, at least as compared to the closed rooms necessary in America and Europe This free supply of air is important, whether we believe death to be imminent from cardiac or respiratory failure, but this supply of air matters little to the patient if he does not breathe freely nor does the dose of chloroform amount to aught if it is not drawn into the chest The dose of chloroform is not the amount in the inhaler but the amount taken into the chest and finally the amount absorbed by the blood vessels The rapidity and depth of respiratory movements is therefore, as Lawrie asserts, the entire key to the situation We watch a windmill over a well to see if it is pumping into a reservoir a given quantity of water If the windmill works irregularly so that we know its pumping action is deranged we separate it from the pump until the wind blows steadily, in order that it may pump regularly Similarly we withdraw chloroform, as Lawrie says, whenever respiration becomes disturbed in rhythm or when struggling disturbs it, because it is the first indication that the drug's action is uncertain and because there is no telling the dose which is absorbed While watching the respiration will not warn us of a sudden cardiac arrest in fatty heart plus chloroform depression, neither will the pulse give us such warning and we are confident that the statement of the Hyderabad Commission that the *respiration should be watched is correct*, for we believe from a long series of observations that gradual cardiac failure never occurs without producing respiratory changes from the very first In other words, we do not believe that in a healthy heart chloroform can cause serious disorder without as a result of beginning disorder disturbing respiration and, second, that in a healthy heart a quantity of chloroform sufficient to disorder it will by its direct action disorder the respiration If, as an extra precaution, one assistant watches the pulse while the other watches the respiration, very well, for though the respiration is the more important function the man watching the pulse might discover an irregularity which the anesthetizer may not see reproduced in the respiratory action, but as divided attention generally means a slighting of both objects in view Lawrie is right in insisting on the pulse being let alone

In answer to question five we have several points to offer 1 Hot climates where ether is inapplicable and where a free circulation of air increases the safety of the patient, 2 Chloroform may be used whenever a large number of persons are to be rapidly anesthetized so that the surgeon may pass on to others and save a majority of lives, even if the drug endangers a few, as on the battlefield where only a small bulk of anesthetics can be carried 3 Its employment is indicated in cases of Bright's disease requiring the surgeon's attention, owing to the fact that anesthesia may be obtained with so little chloroform that the kidneys are not irritated, whereas, ether, because of the large quantity necessarily used, would irritate these organs Quantity for quantity, ether is, of course, the less irritating of the two, 4 In cases of aneurism, or great atheroma of the blood vessels, where the shock of an operation without anesthesia would be a greater danger than the use of the anesthetic, chloroform is to be employed, since the greater struggles caused by ether and the stimulating effect which it has on the circulation and blood pressure might cause vascular rupture, 5 In children or adults who already have bronchitis, or who are known to bear ether badly or, in other words, have an idiosyncrasy to that drug, chloroform may be employed, 6 Persons who struggle violently and who are robust and strong are in greater danger from the use of chloroform than the sickly and weak, probably because the struggles strain the heart and tend to dilate its walls

The safest method of administration is by Lawrie's or Esmarch's inhaler because these provide free circulation of air and do not distract the attention of the anesthetizer from the respiratory movement by complicated apparatus Apparatus much like these in allowing a free amount of air, are the Hyderabad chloroform inhaler, or open-ended cone with Krohne and Seseman's respiration indicator attachment The Junker inhaler, even with its modifications, is too complicated and cumbersome and while less chloroform is wasted in administering the drug it must all be thrown out of the bottle afterwards If used at all it should be used with the increased air supply and respiration indicator of Krohne and Seseman

We agree so heartily with Lawrie's conclusions that we print them below

1 —The chloroform should be given on absorbent cotton stitched in an open cone or cap (A depression made through the opening in the inside flannel bag will answer as well)

2 —To insure regular breathing, the patient lying down with everything loose about the neck, heart and abdomen, should be made to blow into the cone, held at a little distance from the face The right distance throughout the inhalation is the nearest which does not cause struggling or choking or holding of the breath Provided no choking or holding of the breath occurs, the cap should gradually be brought nearer to, and eventually may be held close over, the mouth and nose as insensibility deepens

3 —The administrator's sole object while producing anesthesia is to keep the breathing regular As long as the breathing is regular and the patient is not compelled to gasp in chloroform at an abnormal rate there is absolutely no danger whatever in pushing the anesthetic till full anesthesia is produced

4 —Irregularity of the breathing is generally caused by insufficient air, which makes the patient struggle or choke or hold his breath There is little or no tendency to either of those untoward events if sufficient air is given with the chloroform If they do occur the cap must be removed, and the patient must be allowed to take a breath of fresh air before the administration is proceeded with

5 —Full anesthesia is estimated by insensitiveness of the cornea It is also indicated by stertorous breathing, or by complete relaxation of the muscles Directly the cornea becomes insensitive, or the breathing becomes stertorous, the inhalation should be stopped The breathing may become stertorous, while the cornea is still insensitive The rule to stop the inhalation should, notwithstanding, be rigidly enforced and it will be found that the cornea always becomes insensitive within a few seconds afterwards It is only necessary to add that the patient should be so dressed for an operation that his respiratory movements can be easily seen by the chloroformist In the climate of India this is not difficult to manage, but it is rather more so in the climate of Europe, so that in this respect, and in this respect alone, the chloroformist in England and America is placed at a distinct disadvantage compared with the chloroformist in India

Note —Since writing this report two important papers upon this subject have appeared in the London *Lancet* The one by Gaskell and Shore, in which they carried out a line of ingenious cross-circulation experiments, and from which they conclude that the fall in blood pressure seen under chloroform is due to cardiac rather than vasomotor depression, and another paper published by Lawrie, in the London *Lancet* for Feb 11, 1893, in which he refutes the statements made by Gaskell and Shore, and details experiments which he believes combat those of the two investigators just named

The concluding paragraph of Lawrie's latest contribution to the subject states the facts so clearly and is so in accord with what we have tried to set forth in our own report that we can not do better than quote the paragraph

"The Hyderabad Commission's work proves that, while Syme's principles are right, there is no such thing as a safe method of chloroform administration It is no longer a question of the superiority of the London method or of the Edinburgh method, absolute safety can be attained neither by watching the respiration nor the pulse for signs of danger—which are in either case proof of improper administration or of overdosing Moreover, overdosing may take place whether the anesthetic is given on lint or on a towel, or on a cap such as we use, or with Junker's or Skinner's or any other form of apparatus The all-important point is that the breathing shall never be interfered with in any way Safety under chloroform can unquestionably be insured, but it can only be so by attending to regular natural breathing, and, whatever method is employed, no one can deny that it is the bounden duty of the chloroformist to maintain natural breathing throughout the whole period of administration To maintain natural breathing requires careful training and considerable experience, but if those conditions be fulfilled it is impossible to produce anything with chloroform but anesthesia, and the Hyderabad Commission has shown that anesthesia alone is entirely free from risk," provided the drug is not pushed too far and that the patient is in ordinary health We would prefer to make the last sentence read "Anesthesia can be safely produced by chloroform"

SELECTIONS

Summary of the Surgery of the Tendons[1]—With Six Illustrations from Lejars—By John B Hamilton, M D, LL D, Chicago

The Surgery of the Tendons is the somewhat ambitious title laid down on the program as the title of my paper, but as time has not permitted me to review the whole subject in extenso, I will ask you to excuse my shortcomings, while I give you a condensed statement that will probably need no further condensation at the hands of your secretary After all, I think most of the ideas that are new, or even presented in new form, can be stated in very few words

I will pass over lightly the literature of the tendons, although that is very extensive, not only in medical literature, but in general literature From the time Achilles' mother, Thetis, dipped him in the Styx, to make him immortal, by grasping tightly the tendons that have since borne his name, down to the middle ages when ham-stringing an enemy was a pleasant pastime of the bold Barons, the tendons have had considerable prominence

In the surgery of modern war, where the wounds are made by bullets and rarely by bayonet or saber, the tendons are rarely wounded, for the very obvious reason that bullet wounds in battle are received on the body in exact proportion to the exposed area

In civil life, the tendons are subject to dislocations more frequently than to wounds

These accidents, though attended by few pronounced symptoms, need careful attention

Contusions and punctured wounds need but scanty reference, owing to the lack of vascularity, contusion of a tendon is difficult to produce Punctured wounds, when produced by any instrument causing laceration of the tendon fibers, are usually accompanied by retraction of the cut fibers and local necrosis of the connective tissue filaments, when made by a cutting instrument held parallel with the fibers, the wound closes with great rapidity, first by swelling of adjacent fibers from limited congestion, and second, by direct adhesion The tendon sheath, however, made up as it is of loosely united connective tissue, is exceedingly liable to infection, and tenonitis, so called, almost invariably runs its course in the tendon sheath Notwithstanding the fact that longitudinal wounds or separations of the tendons heal with rapidity, yet the resulting cicatrix impairs the efficiency of the tendon for a longer or shorter period, according to the area involved Sometimes this impairment amounts to total suspension of the functions of the members, and the practical deduction from this lesson is, that *in opening abscesses lying underneath a tendon, the incision should invariably be made at the side of the tendon, not through it* This practical advice, I believe, is not generally adhered to in the cases of finger abscess, but it should be In abscesses of the fingers the original point of infection is usually the periosteum, the pus seeking exit in the line of least resistance usually projects from under the tendon on either side, and if the tension be not relieved at this time the adjacent bone participates in the inflammation, and it too becomes necrosed

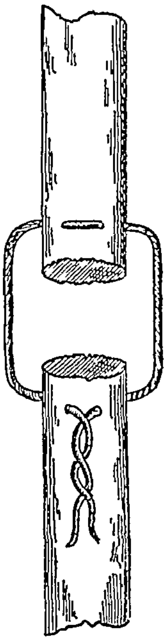


Fig 1 Tendon Suture of LeFort

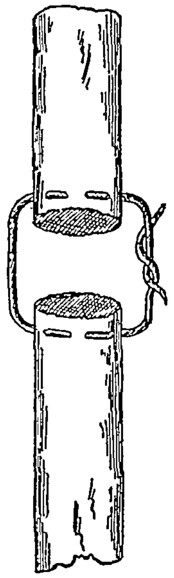
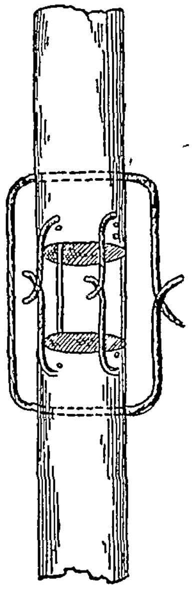


Fig 2 Tendon Suture Woflar After Lejars



Gig 2 Suture of LeDentu

It has been mentioned that the cicatrix impaired the functions of the tendon Not only does this impairment occur but, owing to the feeble circulation of the tendon, the absorption of the redundant cicatricial tissue is slow, and sometimes the impairment is permanent The sheath and the adjacent connective tissue being richer in blood vessels, not only accomplish repair sooner, but they more speedily remove the cicatrix

Theories of repair of tendons after injuries have undergone the same successive changes as that of repair of wounds elsewhere The theory of Hunter, that the elements of the blood were alone concerned in the repair of tendons, held sway until Bouvier in 1857 asserted that the tendon sheath by proliferation filled up the interspace between the ruptured ends Henle, Robin, Adams, Paget, Brodhurst, adhered to the theory of repair by exudation and direct union of the ruptured ends Turcker, Donders, Virchow, Remak Kolliker, Cornil and Ranvier have confirmed in the main the cellular theory of Bouvier by examination of cicatrices of tendons in man and animals and experimental tenotomies

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[1] Read at the Mitchell District Medical Society

According to Krauss, who wrote a memoir on this subject in 1888, "the first alteration in the tendinous ends is like a degeneration, a shriveling at the center and a granular appearance of their protoplasm But the principal modifications consist in a proliferation of the tendon cells, in which there is often observed the karyokinetic figures, and a corresponding enlargement of the fibrillar tissue Afterwards the cells become round or angular and are prolonged from the fibrils, and the prolongations are found in the peri- or intra muscular fascia "

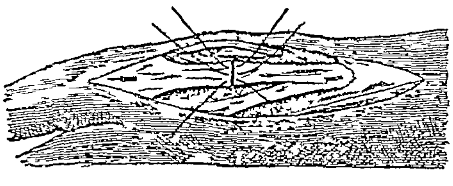

Fig 3 Suture by Anastomosis (Method of Schwartz) After Lejars

We may conclude that repair is complete when the functions of the muscle are restored, but as the restoration of the tendon necessarily depends upon the length of the separation space, we must interfere if we desire to secure early union

The question of suture of tendons is the one that most concerns the practitioner Shall the ruptured tendon be sutured or left to nature?

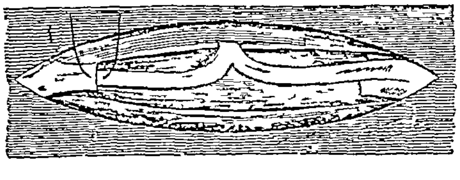

Fig 4 Method of Czerny After Lejars

Galen opposed the suturing of tendons, and so long as his authority remained undisputed, the interdict prevented it The credit of the change is given to Avicenna, and since his day surgeons have vied with each other in producing new forms of sutures, both in material and manner of application My distinguished colleague, Professor Nicholas Senn, has been engaged for some time past in an exhaustive research of the medical literature of intestinal sutures, and the fruits of that research will soon appear in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION From that learned and instructive paper it will appear that it is almost impossible at this day to devise a new form of suture This, however, only further corroborates the keen suggestion of Aristotle, "that probably all art and all wisdom had once been fully explored and again forgotten "

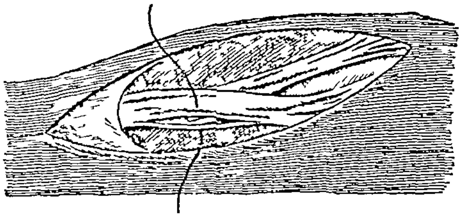

Fig 5 Suture by Anastomosis (Method of Tillaux and Duplay) After Lejars

Not to take up your time with further historical allusions, I will only mention the sutures of LeFort, Wolfler, LeDentu, Tillaux, Duplay, Schwartz and Czerny

The material most in favor at present is horsehair, and chromicized catgut Subcutaneous wounds of the tendons do not require suture unless the distance between the ends be very great, but all open wounds severing tendons require that the tendon be sutured The difficulty which has led to so many forms of suture is the separation of the fibers by reason of their retraction, a complete ligature of the tendon could only result in strangulation necrosis of the ends The drawings herewith from Lejars give you a fair idea of the different methods Of these, perhaps the most ingenious is that of Tillaux and Duplay, which consists in suture of the peripheral end of a cut tendon in a slot cut in an adjacent tendon Finally, we have the proceeding of Czerny, by which a splicing is effected by transplantation Transplantation of tendon sections has been made by Gluck, Georges Assaki and Fargin Chassaignac as long ago as 1853 had united a tendon to the skin, in a case of section of the flexors of the thumb and index finger, and by the tension on the cutaneous cicatrix to which the tendon was united had good motion of the thumb and finger

Where the separation is of long duration, both proximal and distal ends must be freshened

LUXATIONS —Dislocations of the tendons are quite common, the most common being the dislocation of the long head of the biceps, from the bicipital groove of the humerus This accident is so thoroughly described in most works on dislocations, I will not dwell upon it here The dislocation of the peroneal tendons from their groove at the external malleolus has escaped very much notice in the systematic works on surgery I have seen two examples of this dislocation within the past year Both were employes of the C, B & Q R R, and both were switchmen The accident may be recognized by pain, inability to turn the foot outwardly without pain, and the tendon may be seen and felt resting on the external surface of the malleolus One of my patients acquired the habit of throwing the tendon out of its groove at will, the operation itself being painless The attempt to walk while the tendon was in this abnormal position was very painful He could reduce the dislocation easily by manipulation The action seems to be produced while the weight of the body is thrown on the ball of the foot, the foot being extended and slightly rolled toward the inner border Once produced its recurrence is common The accident is also alleged to have occurred to horseback riders

The reduction of dislocation of the peroneal tendon is easily effected, but the difficulty is to retain it in position Fixation by the Martin's bandage, incision and suture have each their advocates, and Madyl of Vienna deepened the malleolar groove with a chisel, in my own cases the men being on the hospital list of the railroad company, declined to submit to an operation There is a strong probability that suturing the peroneal tendon to that of the flexor longus policis, which is adjacent, might prevent its return, but the operation of Prof Albert seems to fully meet the indications —*St Louis Medical Mirror*, *Sept*, *1893*

Trional —Koppers (*Intern Klin Rund*, 29, 30, 1893), observed the action of trional in twelve patients and arrived at the following conclusions In most cases of simple insomnia 15 grains sufficed to induce sleep within half an hour, 20 or 30 grains may be given if necessary, but with still larger doses the effect does not seem to increase proportionately Where pain is present some, though not much, sleep results Owing to the rapidity of its action trional is best taken at bedtime in some warm vehicle, such as milk or tea The after effects consisted only in slight heaviness in the morning, owing, apparently, to the direct action of the drug upon the cortex of the brain, and some slowing of the heart's action If necessary, it also can be administered per rectum, the action thereby not being lessened —*British Medical Journal*, Sept 9, 1893

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO 68 WABASH AVE, CHICAGO, ILLINOIS

All members of the Association should send their Annual Dues to the Treasurer, RICHARD J DUNGLISON, M D , Lock Box 1274, Philadelphia Pa

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SATURDAY, OCTOBER 14, 1893

EXTRA-UTERINE PREGNANCY

Nothing in surgery is more typical of the advances which modern science has made than is the treatment of extra-uterine pregnancy Although the axiom that death was due to hemorrhage and that the bleeding vessel must be secured was laid down over a century ago, it was a half century before the precept became practice and not until the present time, following the teaching of MR TAIT, has the practice received the sanction of the operators of the world If there was nothing else of which he might be proud, the abdominal surgeon might well point to the life saving record in ectopic gestation

Although the modern literature of the subject has assumed enormous proportions, beginning with the classical work of DR PARRY in 1876, there are still many points on which there is by no means a consensus of opinion in the profession In the first place, there is a division as to the possibility of an absolute diagnosis previous to rupture The disease is simulated by so many conditions, that it is unwise to lay down a train of symptoms which shall be taken as convincing evidence of the existence of an ectopic pregnancy So closely does miliary disease of the ovary simulate ectopic pregnancy that skilled observers, men of wide experience, have been misled The so called "classical symptoms" of extra-uterine pregnancy are all here—the absence of one or more monthly periods, followed by a hemorrhage from the uterus, the morning sickness, the boggy tumor in the ovarian region—all may be present in tuberculosis of the ovary and may easily deceive the physician into thinking the case one of misplaced pregnancy Again, the seeming extra-uterine pregnancy proves at the operating table to be a Fallopian tube filled with pus and causing the pain and hemorrhage that have given rise to the mistaken diagnosis A pedunculated fibroma lying to one side of the uterus may present close resemblance to the graver trouble, or a normal pregnancy in a thin-walled uterus may produce such symptoms as to render a positive diagnosis between the two conditions possible only after weeks of anxious waiting

Men of the rare opportunities of study and the large experience of MR TAIT and DR JOSEPH PRICE confess that they have been misled repeatedly and are almost willing to say that a diagnosis prior to rupture is impossible

MR TAIT in his monograph on ectopic pregnancy and pelvic hematocele, says

> "I have never but once been called upon to make an examination until the rupture had occurred, and in that case there was neither history or symptoms which enabled us to do more than determine that there was tubal occlusion, not, indeed until the rupture occurred and the abdomen was opened was a diagnosis possible Under these circumstances I think I may be excused for maintaining a somewhat skeptical attitude concerning the correctness of the diagnoses of those gentlemen who speak so confidently of making certain diagnoses in cases of tubal pregnancy before the period of rupture, and who speak with equal confidence of curing the cases by a puncture, either simple, medicated or electrolytic"

DR PRICE is even more positive in his opinion as to the difficulty, if not impossibility, of diagnosis previous to rupture In a recent paper he says

> "*Exceptionally*, if *ever*, is the trouble recognized before rupture The few cases recorded have all been by men with one experience, with very little knowledge of the murderous troubles found in the pelvis A few surgeons, with an experience of nearly one hundred sections for ruptured tubal pregnancy, have never found one unruptured"[1]

In the face of all the evidence on the subject it would seem that the diagnosis that is reported as made before rupture, is rather the result of a happy chance than the outcome of knowledge and weighing of symptoms on the part of the attendant

After rupture the diagnosis becomes easy, though rupture has many times been mistaken for an abortion by the attendant physician The sudden collapse with all the signs present of internal hemorrhage and the agonizing pelvic pain present a picture to the mind so vivid as to make mistake impossible A pelvic examination and the finding there of a boggy mass to one side of the uterus would settle the case beyond a doubt and one feels inclined to ask if, in those cases that have been mistaken for abortion, a sufficiently thorough examination had been made or if the doctor merely took the woman's statement that she was aborting

Rupture takes place either into the peritoneal cavity or between the folds of the broad ligament If into the peritoneal cavity the wretched mother rapidly succumbs to the loss of blood and the peculiar and excessive shock that follows the accident Rarely, it happens that the rupture takes place into the broad ligament and the fetus, developing in its new position, goes on to term and dies, condemning its bearer to invalidism and all the horrors of abscesses breaking into bowel or bladder and discharging the bones of her unfortunate offspring

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[1] Medical and Surgical Reporter, Sept 30 1893

It would seem as if common sense would point out the treatment In any such hemorrhage from another part of the body, the physician would scarcely do his duty did he not seek out the bleeding vessel and secure it, yet we find men advocating *anything rather than the surgical treatment* Puncture of the sac, injections into it of lethal substances, and electricity have all had their supporters These agents find their use only previous to rupture and the uncertainty of diagnosis, and the fact that even in the hands of experts they have failed to save the patient from an operation are a sufficient answer to their claims

That cases have recovered without operation is no reason that the surgeon should shirk his duty The moment rupture occurs, the abdomen should be opened and the hemorrhage stopped by the removal of its cause In no event should the case be allowed to go on in the hope that the patient, by some providential agency, may survive The dangers of the hemorrhage, with the peritonitis and septicemia that follow the accident are too great to be set aside

An important point in the surgical treatment is whether, in a ruptured tubal pregnancy of one side, the other side should also be removed to prevent the recurrence of the accident In a paper on "Repeated Extra-uterine Pregnancy," published in the JOURNAL for Sept 16, 1893, DR MCKELWAY reports a case where the patient, after providentially escaping an untreated tubal pregnancy of one side was seized nine months later by a similar accident on the remaining side, from which she escaped only after a prompt operation and heroic measures In discussing the case the author says "My study of this and other cases leads me to the conclusion that both tubes and ovaries should be invariably removed in every case of ectopic gestation " In view of the fact that the causes of a pregnancy in one tube may be present in the other, is it right that the woman should be exposed to the chances of a repetition of the accident The question is one of great importance It is possible that the accident may never recur and there are many instances where the patient has subsequently had normal pregnancies and remained healthy To offset this are the cases where the second ectopic pregnancy has followed a normal pregnancy In the discussion which followed the paper, the conservative ground was taken that the other side should not be removed unless there was evidence of existing disease Removal of the sound side adds slightly to the risks of the operation by increasing the shock and prolonging the operation, but, in a patient already at death's door and where safety depends on a short, dextrous operation, these considerations weigh heavily The question is one to which our operators with large experience should turn their attention, and it is for them to decide whether the chances of a presumably healthy tube being the site of a subsequent pregnancy are sufficiently great to call for the more severe procedure

Another point is raised as to the treatment of the placenta in case the pregnancy is so far advanced as to render the removal of the entire sac impracticable or dangerous Various plans of procedure have been devised The sac has been stitched to the abdominal wound and drained it has been sealed and left in situ to be absorbed—all with more or less good results Sound surgical sense would teach that the safety of the patient lies in the complete removal of the sac wherever possible, and, with the agents at our command, heat and gauze packing, the hemorrhage can be controlled and the placenta removed in almost every instance with a prospect of safe recovery for the patient Where it has grown so intimately to surrounding structures—often intestines and important viscera—it should be thoroughly cleansed by repeated washings with boiled pure water and hermetically sealed, in order that it may be digested and gradually absorbed with the least possible chance of septic decomposition

A third question is whether, in case the patient survive a primary rupture the case shall be allowed to go on to viability of the child in order to save the life of the child It is an obstetric maxim about which there is not the slightest cavil, that the mother's life is to be respected more than the child's, and it would seem that the added risk to the mother should weigh against the child's life and therefore the misplaced product of conception should be removed as early as it is discovered Delays in this as in other matters are full of danger

From the beginning to the end, extra-uterine pregnancy is full of danger The sudden urgency of the accident, coming as it does without warning, makes it a matter of the greatest concern to the specialist and the general practitioner alike In the majority of instances, the diagnosis must be made by the family physician, and the specialist comes in only to confirm the general practitioner's opinion and to perform the life saving operation

"Tubal pregnancy is a grave, perilous trouble from the very instant of its inception, and from the instant of its first recognition there should be no suspension of the vigil over it There is but one safe choice, and that is prompt removal when the accident is first recognized " Such are the words of a successful operator and they contain a truth that it were well to understand, and knowing to heed

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Blank applications for membership in the ASSOCIATION, at the JOURNAL office

THE INTERNATIONAL PUBLIC HEALTH CONGRESS

The meeting of the Public Health Congress this week constitutes one of the most interesting of the series of World's Fair International Medical Congresses Interesting alike to the physician and the laity, the proceedings of the Health Congress are of value to all mankind The cure of disease largely concerns the readers of the JOURNAL, but the prevention of disease appeals alike to all

We are sure, therefore, that the address of PRESIDENT DURGIN which is printed exclusively in the JOURNAL, will be widely appreciated, not only on account of its intrinsic interest, but because the author as Chairman of the Board of Health of the city of Boston, for the past twenty years, has had exceptional advantages for the study and solution of most of the complicated questions of municipal sanitation, that are likely to interest health officers throughout the world

The merging of the American Public Health Association with the International Congress of Public Health proved a wise measure, as the considerable number of papers on the program by foreign authors added much to the interest and success of the meeting

That veteran of sanitary science, DR JOHN H RAUCH, was Chairman of the Committee of Arrangements, and he was ably seconded by DR M R BREWER, the Secretary of the Committee

THE AMERICAN PUBLIC HEALTH ASSOCIATION

This organization has been in session during the past week in connection with the International Sanitary Congress, as will be seen elsewhere in the columns of the JOURNAL It has arrived at its majority This is its twenty-first annual meeting The necessity for such an Association was felt immediately after the war by those who had been trained in the military service and had subsequently been called to act as health officials in a civil capacity The war demonstrated the importance of preventive medicine A fighting force has to be kept in fighting condition

Textbooks on sanitary science were few, and the best of them were not adapted to the civic health officer Each such health officer practically was acting independently The necessity for bringing together, in one body, those interested in sanitary matters, for the purpose of inaugurating measures for the restriction and prevention of contagious diseases and for the diffusion of sanitary knowledge among the people, was so apparent that after several years of conference and correspondence the Association was formed in the fall of 1872

The only attempt at organization prior to this was the quarantine convention, composed of representatives from the cities of Baltimore, Philadelphia, New York and Boston DR WILSON H JEWELL of Philadelphia, was the leading spirit in this movement This was at the time when quarantine was the only preventive measure used to combat foreign pestilence This convention, after an existence of four or five years, had been extinct some time before the creation of the American Public Health Association For several years the new Association required a great deal of labor and self sacrifice on the part of those who had inaugurated it to keep it in existence The growth of the Association and the work it has accomplished prove the correctness of the views of its founders Its membership has been augmented from year to year, until it now constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the United States, the Dominion of Canada and the republic of Mexico Under the impetus given by its work, State and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely diffused

The terms of its membership are sufficiently broad to include all who are interested in public health questions Its transactions not only contain reports of patient laboratory investigation, but the practical conclusions of those actively engaged in sanitary work

Preventive medicine is necessarily and entirely disinterested and of the highest type of benevolence, and the American Public Health Association should have the cordial support of all who are interested in the well being of humanity

THE INSPECTION OF MERCHANTABLE WATERS

The vast number of places in our country where mineral and table waters are sold has made it a matter of solicitude whether or not they are what their label represents It is not only distressing to be doubtful about the quality of the bottled waters, but it amounts almost to panic when we reflect that what purports to be Brother HART'S APOLLINARIS may be a vile mixture, filtered from the Chicago River, or pumped from the nearest hydrant, and that even Wisconsin, Waukesha or Chippewa Spring water, to say nothing of the unnamed thousands, may also be either extremely stale, or altogether fraudulent in any market

There is no question but advances in civilization will ultimately require protection of the people against fraud, but as yet we know of no municipal ordinance which requires the inspection of bottled waters Not only is it an act of fraud to sell waters under a false label, but it is in effect criminal, when persons imagine they are receiving medicinal waters as prescribed by their physician

There is a certain water in West Virginia of great value in gastritis Now if any physician in any city knowing its virtues, should prescribe it, and the patient obtain the product of the hydrant instead, no words could sufficiently characterize the fraud, and yet we are credibly informed that there exists in the city of Chicago, a factory where not only the labels, but the corks and bottles, may be procured in exact imitation of any known water We doubt extremely whether Chicago is alone in this iniquity, and it is more than probable that a large percentage of the water sold in bottles is fraudulent

The mere suspicion of fraud in the sale of these waters, is enough to cause many to turn to other beverages

"If she be not fair to me,
What care I how fair she be"

If this be true of the bottled waters, what can we say of the waters delivered to customers by incorporated companies in bulk? The water *may* be good, but nobody can say so except the vendors themselves, for there is no qualified inspector

The need for water inspection is therefore one of urgency, and we shall be pleased to record the date of passage of the first municipal ordinance for the prevention of fraud in the sale of potable and mineral waters

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION

The annual meeting of the Mississippi Valley Medical Association was held at Indianapolis on October 4, 5 and 6, under the presidency of Dr R S Sutton of Pittsburgh

The attendance was less than at some meetings previously held, but it is easily accounted for by the recent financial stringency and the Pan-American Medical Congress The proximity of the World's Fair at Chicago, and to a less extent the St Louis Exposition served to attract members in those directions

As usual, the American Medical Association members constituted about four-fifths of those attending, and their share in the scientific work was proportionate

The papers were excellent, and we print in other pages an abstract of them

The discussions were well sustained, animated and interesting They would have been more voluminous but for lack of time,—the great number on the program allowed but limited time for discussion

The high standard of the papers read at this meeting is a source of gratification to the well wishers of the Association

A MEDICAL EDITOR'S RESIGNATION

Dr Cyrus Edson has resigned from the editor's chair of the *Doctor of Hygiene*, of New York At least he is reported as saying that his name will not appear again as responsible for its management The journal was formerly known as the *Doctor*, but soon after its change of name and the entry of Dr Edson, then the Sanitary Superintendent and later a Commissioner of the Health Department, the make up of the paper became such as to attract attention The names and portraits of the president and officers were published on the front cover, as if it were an official organ of the Board and it purported to be "in the interests of American boards of health" Various schemes of a sanitary nature sought the columns of that paper, with the intention apparently of taking shelter under the roof of this bright project A water-filter company at the head of which Dr Edson's name figured, was among these The imputation, however, that the position of the latter as a health official was liable to misuse for private gain, led him to withdraw from the company There have been a great many resignations of late years in relation to the New York Board, but very little repose The politicians have their grip on it, and use it to the utmost of their power

ORGANIZATION A PROFESSIONAL NECESSITY

The *Medical News* of Philadelphia, which has been making many pointed appeals for a greater and stronger union, in a recent and able editorial on the attitude of the lay press to the medical profession says

> "A Philadelphia newspaper lately made itself the agent of some patent medicine cure-all, and distributed thousands of bottles over its counter
>
> "There remains, of course, the humiliating confession that the existence of the newspaper doctor and of the newspaper debauch in quackery is indirectly and in large part the fault of the profession itself, dependent upon the fact that we are a non organized profession, and that what organization we have is not used in the practical righting of medical abuses Thus, again and perpetually, recurs the truth that every medical scandal and every aspect of our powerlessness resolves itself into our sins of disorganization, and of non interest in practical matters and in preventive medicine Out of a hundred thousand physicians in America hardly a hundredth part are active members of the American Medical Association, and the section meetings of "congresses" of physicians could almost always be held in an ordinary private sitting room of a workman's cottage—so slim is the attendance And when we do meet we discuss the symptoms and treatment of individual cases of illness, leaving out of consideration the production of disease, the prevention of it, and the domination of legislation, the newspapers, and the lay world by the quack and the pill-vendor
>
> "How can we bring any influence to bear upon the newspapers if we present the spectacle of a disunited and factional lot of scramblers and indifferentists? There are many of these newspapers who are simply ignorant and thoughtless as regards the disgrace of their advertising columns, and who could easily be shamed out of it if we were but united among ourselves, and would use our united strength for matters of practical reforms of medical abuse and preventive medicine Organize, and use organization for the world's sake! is the command of professional honor and of benevolence"

Honors to Prof Pozzi—The Chicago Gynecological Society, of which Dr E J Doering is President, gave a dinner to Prof S Pozzi, Professeur Aggregé to the Faculty of Medicine and Surgeon to the Lourcine-Pascal Hospital of Paris, on Friday, October 6

SOCIETY NEWS

Mississippi Valley Medical Association

Abstract of the Proceedings of the Nineteenth Annual Meeting held at Indianapolis, Ind , Oct 4, 5 and 6, 1893

FIRST DAY—GENERAL SESSION

The Association met in Plymouth Church, and was called to order by the Chairman of the Committee of Arrangements, Dr George J Cook of Indianapolis

Divine blessing was invoked by the Rev Frederick E Dewhurst

Governor Matthews was introduced and delivered an

ADDRESS OF WELCOME

The President, Dr R Stansbury Sutton of Pittsburg, was introduced and delivered the President's Address He selected for his subject,

FIBROID TUMORS OF THE UTERUS

After giving a definition of these tumors the author dwelt upon the etiology, which he said is still a mystery They are more frequent in the black than in the white race In both races they are more frequent in the body than in the neck of the uterus, and more frequently situated in the posterior than in the anterior wall After the menopause is established these tumors generally disappear, unless they have undergone cystic degeneration Bearing on this point Dr Sutton reported an anomalous case The patient was 43 years of age, she had never menstruated in her life, had never shown any physiological evidence of ovulation, had been twice married, was then a widow and childless She had for ten years a large fibro-myoma of the uterus, which thus far gave no evidence of atrophy

With regard to the pathology, the tumor always has its origin in the substance of the uterine wall or sub peritoneal connective tissue

The symptoms accompanying the presence of these tumors in various localities and stages of growth are widely different However, the class of indications are patent as found in the vast majority of cases, and may be tabulated as follows 1, vague pain in the pelvic region , 2, pain referred to the front or back of the leg , 3, irritability of the bladder or rectum , 4, uterine tenesmus , 5, menorrhagia or metrorrhagia , 6, dysmenorrhea , 7, profuse leucorrhea , 8, serous discharge from the uterus

The diagnosis of very small fibro-myomata, when many of the leading symptoms are absent, is considered extremely difficult As far as the medical treatment is concerned, but little can be done for the relief of patients suffering from fibro myomata, and nothing for those suffering from those tumors which have undergone cystic degeneration Surgically, there are but two routes by which solid, uterine tumors can be removed, either through the vagina or by abdominal section With the exception of small tumors with a well defined pedicle, all sub peritoneal fibro-myomata are reached only by section of the abdominal wall Dr Sutton in one case divided the posterior wall of the vagina and through this opening delivered the tumor

SECTION ON GENERAL MEDICINE

Dr O Everts of College Hill, Ohio, Chairman

FORENSIC MEDICINE

This paper was read by Dr C G Comegys of *Cincinnati* The author had come to the conclusion, from his experience, that there are but few lawyers sufficiently informed in medical science to conduct a case in the interests of truth and justice, especially the most important cases in medical jurisprudence Every physician, as an expert witness, must have observed the embarrassment of lawyers in trying medical cases They ask questions enough, but from their lack of medical experience they are incapable of thoroughly understanding the answers of a witness, so that the proper interpretation of them, bearing upon the history of a case at the bar, may be reached, and when endeavoring to give the court and jury clear views of the subject by additional questions, they often confuse the whole investigation This disagreeable state of affairs is usually brought about by certain lawyers who have armed themselves by a superficial study of medical works for the occasion Dr Comegys believes that the high order of legal men will welcome well-trained men in medicine as coadjutors in the lofty work of establishing justice

PROBLEMS OF PUBLIC INTEREST CONCERNING THE INSANE, by Dr Orpheus Everts of College Hill, Ohio The author said there are several problems of public interest involved in the present relations of society to the insane Among the more important of these are questions of dependency and curability of the insane and the preventability of insanity The author summarized his conclusions as follows

1 —Intelligent provision for the insane implies provision for various classes, according to the capabilities of enjoyment and the exercise of variously impaired faculties

2 —Public provision for whatever class of insane persons implies housing, clothing, food, sanitary and moral discipline, amusement and employment for such as are capable of being amused and employed, and medical treatment for the sick The essential features of such provision are adaptability to the needs of each distinctive class

3 —Great, expensive, architecturally imposing palaces, providing alike for all classes, however serviceable they may have been, esthetically considered, in times past, as they unquestionably were, are no longer necessary nor appropriate to the needs indicated So long as the insane are comfortably housed, each class according to its condition, it is comparatively unimportant whether it be in large or small houses, cottages or palaces, connected or detached, in high or low buildings

4 —It is important that the insane of all classes be well fed under careful supervision , but whether in small or large dining rooms, by groups or congregations, is of little consequence , that it should be a matter of convenience rather than of number

5 —It is important that public institutions for the insane be well organized and administered

6 —It is wise to retain in office capable men who have demonstrated their fitness by successful management of affairs, so long as their capabilities continue to be elastic

CHOREA IN ITS RELATION TO RHEUMATISM

This paper was contributed by Dr I N Love of St Louis The author said that recently the pathology of this disease has been cleared up to a very considerable degree, so that now it is a definite affection and one especially incident to childhood Dr Love reported a case of chorea occurring in his practice with a marked history of rheumatism, it being one of ten cases observed and illustrative of this class The cases did not occur successively Between them other cases presented themselves *minus* the rheumatic history, but four of the number occurred in rapid succession with as pronounced rheumatic history Of the entire ten, seven were girls Among the exciting causes of the disease are irritation in the nostrils and adenoid growths in the vault of the pharynx Inasmuch as Kirkes, Tuckwell, Hughlings Jackson and Bastian support the embolic theory of the disease, and in consideration of the fact that chorea is so frequently associated with endocarditis, we should be on the alert to interrogate the heart when called to a case of chorea As matters now stand we have numerous exciting causes resulting in chorea

CHOREA , ITS PATHOLOGY AND TREATMENT

This paper was contributed by Dr H M Lash of Indianapolis So much uncertainty has existed regarding the pathology of chorea, that its treatment has been varied and widely different in its character and aim, amounting even to empiricism Under all forms recovery has been recorded , but it is certainly interesting to note the variety of views which have been from time to time, and which are still held, in regard to this most peculiar disease The author then gave the causes of chorea as laid down in the recent work on nervous diseases by Dr Landon Carter Gray He referred to the repeated experiments of Dr H C Wood, who announced his conviction that the choreic movements had their origin in the spinal cord and were directly due to paralysis or depression of the inhibitory function of the cells of the spinal cord Acting on the strength of this conviction, Dr Wood sought for a remedy that would strengthen the proper function of these cells, and he found it in quinin

Dr Lash then reported a case of acute chorea in a boy 13 years of age The choreic movements were constant, general and pronounced It was agreed to try Dr Wood's suggestion, and so the patient was put on full doses of quinin Twenty grains a day, in four doses, were given him for three days, when he showed considerable improvement The quinin was increased to 25 grains a day and given in that amount for three days more when the patient again reported There were no remaining symptoms of the chorea, and the quinin was gradually withdrawn The patient has remained entirely free from the trouble ever since, and without any future treatment of any kind Another similar case was reported with a successful result

DIPHTHERIA, ITS SPECIFIC DIAGNOSIS

This was the title of a paper read by Dr J C Culbertson of Cincinnati The author said that this disease is of peculiar interest because of its singularity in being more treacherous and insidious in its manifestations than any other affection that is met with by the practitioner of medicine The uncertainty of diagnosis had caused some excellent practitioners to adopt the pernicious habit of diagnosticating and treating all cases of sore throat, whether simple or malignant, as if they were true diphtheria True, the treatment designed for diphtheria may cure a tonsilitis, but inestimable harm may have been done in causing an unnecessary alarm on the part of the patient's family, and the disagreeable inconvenience that accompanies isolation of the patient and quarantining of the family, to be followed by the mockery of disinfection of non-infected apartments and perhaps destruction of clothing and furniture On the other hand, a case of diphtheria, diagnosed as a simple tonsilitis, may be the cause of breaking up a school or producing an epidemic, with an indefinite amount of sickness and many deaths A case was cited in point

Dr Culbertson then referred to the importance of utilizing the science of bacteriology, and mentioned the plan adopted by the New York City Board of Health of having undertaken to provide laboratory facilities for all practitioners of medicine in that city free of charge

A TREATMENT GIVING A LOW DEATH RATE IN CASES OF DIPHTHERIA IN HOSPITAL AND PRIVATE PRACTICE

Dr William A Galloway of Xenia, Ohio, read this paper The subject was treated from the standpoint of recent hospital practice, 234 cases with a death rate of 14 per cent under favorable sanitary surroundings The paper embraced reports from private practice of physicians who had given the treatment faithful trial during the past three years, who unhesitatingly commended its value and all were able to show a death rate below 10 per cent The subject was divided into the *hygienic*, in which the most careful attention was paid to the isolation and surroundings of patients, the *constitutional* and *local topical* treatment, the latter being considered by the writer as secondary in importance Under constitutional treatment, immediately the nature of the disease was suspected, the writer gave 1 grain of calomel for each year of the patient's age up to 18, repeating the dose in four to six hours and met the action of the mercurial with copious hot water injections This treatment was persisted in until the full action of the calomel on the liver and kidneys was obtained, relieving these two important excretory organs of the paretic condition caused by the absorption of the toxalbumin product of the Klebs-Lœffler bacillus Improvement in the patient's appearance was immediate and the mercurials acted freely The quantity of foul smelling grass green dejecta resulting is astounding There is no fear from salivation, as under the most heroic use of mercurials no symptom of salivation has been observed by the writer or his friends Internally corrosive sublimate was given up to 1-80 of a grain, with full doses of tincture of chlorid of iron and alcohol hourly at night and during the day Local topical treatment consisted of peroxid of hydrogen, one-quarter solution, for cleansing the throat, which was commended, while as an escharotic 12 grains of salicylic acid to 1 drachm of alcohol were used twice a day by the physician only It proved of great value in the writer's hands This escharotic is very powerful and should be used carefully if needed

THE STUDY OF A FATAL CASE OF ESSENTIAL TACHYCARDIA

This paper was contributed by Dr John C Sexton of Rushville, Indiana, in which he detailed the symptoms and clinical features of a case of essential tachycardia that died after thirty-five days illness The attractive feature of the case was the response to manipulative efforts, electrical and other, by the Doctor, to produce stimulation of the pneumogastric nerve and thus to slow the heart The paper then reviewed the ordinary symptoms of heart hurry as presented in the literature of the subject and some further remarks concerning the causation, symptomatology and treatment

Papers were also read by Drs R E Haughton of Midland, Texas, A Ravogli of Cincinnati, and others

The address on general medicine was delivered by Dr James F Hibberd of Richmond, Ind His conclusions were

1—That there is a rapid progress being made in preventive medicine

2—That our present conception of the complicated organization of the human body is based on the theory that the Creator in the beginning endowed vitalized matter with a perpetual law of virtue of which man has been developed, step by step, from primitive protoplasm

3—That there is no longer dubiety in the proposition that the cell is the unit of vital activity, and that all living beings are a single cell or an organization of cells and cell products

4—That the influence of the mind on vital activities, normal and abnormal, is not recognized as it should be, and that there is a line of study that would, if properly pursued, dissolve the agnosticism that has in the past embarrassed a knowledge of the reciprocal relations of matter and mind

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

Dr Arthur W Johnstone of Cincinnati, Chairman

The first paper in this section was read by Dr Rufus B Hall of Cincinnati, entitled,

OVARIOTOMY IN THE AGED

The author confined his remarks to patients who were 70 or more years of age He said it was generally conceded as true that any operation upon the old did not promise as good results as the same operation would upon the young or patients in middle life Especially was this true in reference to all abdominal operations necessitating a hard strain upon the system from shock, or from traumatism to vital organs during the operation, as we not infrequently have in the removal of large ovarian tumors Dr Hall maintains that the death rate is not greater than that which usually follows the same delayed class of operations on women between 40 and 50 years of age He had had but three ovariotomies upon women above 70 years of age In each of the first two cases the friends of the patients hesitated to have the operation made on account of the advanced age of the patients In each of these the operation was deferred until the patient was in extremis

Dr Hall then detailed three interesting cases of ovariotomy performed on patients, aged respectively 70, 70 years and six months, and 72 years Judging from the low mortality of the reported cases and from the work of the best known operators, the author is constrained to believe that ovariotomy in old women, if the kidneys are healthy, is as safe as in middle life

THE VALUE OF A CLOSE OBSERVATION OF OTHER MEN'S WORK

This paper was read by Dr William H Link of Petersburg, Ind He said it is by the tireless energy of originality and the endless application of original methods to both the expected and the unexpected in surgery, that has thus far pushed our work and its underlying science toward perfection By close and frequent observation, defects in technique and improper application of surgical measures may be noted and, having been recognized, may be avoided There is no field in which object lesson teaching is so effective, so fruitful of valuable practical results as in gynecological surgery The observer may not always know whether the operation he witnesses carries the patient on to recovery or the contrary, but, if a close observer, he is improving his own surgical judgment He is studying, rejecting, or adopting methods and aphorisms as they impress his intelligence or his reason approves By seeing work done under varying conditions and with different results we readily come to the conclusion that a private hospital is by no means necessary to successful work, that the pure air of a country or village home, or a clean room in a private residence in a city is as good a place for surgical work as the most painted and gilded hospital, and that no one need hesitate because his patient can not have the supposed advantages of some place specially set apart for the sick

Dr L H Dunning of Indianapolis, Ind, read a paper entitled

INTESTINAL OBSTRUCTION FOLLOWING ABDOMINAL SECTION

Of the complications following abdominal section, few are more fatal than occlusion of the intestines It may appear in a few hours after the section or not until several weeks have elapsed In this paper the author dealt with only acute intestinal obstruction The author is conscious of having met with but a single case in 130 abdominal sections, yet this case occurred two and a half weeks after what he had considered a very successful ovariotomy The question of the administration of cathartics in cases of suspected or threatened occlusion of the intestines is one oftentimes most difficult to decide Under such circumstances he is inclined to the belief that during the first week after section cathartics are indicated, and he prefers to administer 1 grain doses of calomel every hour for a few times, then administer 2 drachm doses of epsom salts every two hours until an action is obtained, or it is demonstrated that a harmful effect is being produced A distinct understanding of the pathological conditions possibly present must guide the operator in his search for the cause of the occlusion, and when found it should be dealt with in the shortest possible time consistent with the permanent cure of the patient

THE PRESENT STATUS OF THE TREATMENT OF UTERINE FIBROIDS

This paper was contributed by Dr Xavier O Werder of Pittsburg, and in the absence of the author, was ,read by Dr Thomas B Eastman of Indianapolis For the sake of convenience the author divided the treatment into the symptomatic and the radical, and confined himself to those views which seem to be generally accepted by the leading and unbiased authorities of the present day The principal symptoms produced by uterine fibroids requiring our attention are hemorrhage and pain Hemorrhage is one of the most constant and dangerous complications, and is due to diseased and hypertrophied condition of the uterine mucosa and hyperplasia of its blood vessels (Wyder), or according to the later researches of Semb, to a hypertrophy of the uterine muscles accompanying the growth of the myoma with a simultaneous hyperplasia of the blood vessels The operations practiced for the radical cure of myomatous growths are vaginal enucleation removal of the appendages, enucleation by laparotomy, and supra pubic hysterectomy The author then considered these operations at length

THE ERECT POSTURE FOR GYNECOLOGICAL EXAMINATIONS

This paper was contributed by Dr William B Dewees of Salina Kan , but was read by Dr John C Sexton of Rush ville, Ind

Digital examination per vaginam with the patient in the erect posture affords one of the most positive means for diagnosis in gynecology It is a well established fact that respiration, the various movements and attitudes of the body, as well as pathological conditions, change the conditions and environments of the viscera Thus the importance of posturing the patient in making physical examinations in gynecic practice becomes evident, as most of the symptoms of diseases of the intra-pelvic organs are more marked and very many only manifested when the patient is standing , while certain conditions of descent, prolapse or displacement, may entirely disappear or change when the pressure or the superincumbent weight of the abdominal viscera is removed by the patient being placed in the dorsal, semiprone, genupectoral, or high pelvic positions, therefore the erect posture is of paramount importance as an aid in diagnosis in this field of labor The author emphasized the advantage and necessity of digital examination in the erect posture, more particularly in examinations undertaken for a cure in women of 1, displacements of the uterus , 2, vesical and rectal disorders , 3, lack of perineal and vaginal support , 4, ovarian and tubal disorders , 5, abdominal and pelvic tumors , and 6, differentiation between abdominal tumors and pregnancy

Dr H O Pantzer of Indianapolis, read a paper entitled,

TUBERCULOSIS OF THE PERITONEUM WITH REPORT OF CASES

The author said that the prognosis and treatment of peritoneal tuberculosis have changed within the last decade The accidental discovery of its curability by laparotomy has shifted its clinical relations He then quoted the conclusions of Dr J Whitridge Williams, from the Johns Hopkins Hospital reports, 1892, on tuberculosis of the female generative organs He reported a case of primary genital tuberculosis, giving rise to a tubercular peritonitis, and tubercular disease of the abdominal parietes Case 2 was one of primary genital tuberculosis following childbed, sacculated ascites resembling an ovarian tumor Laparotomy was performed and the patient recovered Case 3 was one of genital tuberculosis complicated with a suppurative infection and pelvic peritonitis Laparotomy was done, followed by recovery of the patient This disease, from being regarded as a fatal and most intractable affection belonging to the domain of internal medicine, since its accession to the realm of surgery has come to be regarded as quite submissive A mistaken diagnosis had repeatedly led to the opening of the abdominal cavity Instead of an ovarian tumor an enlarged gall bladder, a hydronephrosis, or some other legitimate object of surgical interest being found, tubercular disease of the peritoneum in some of its multiple forms presented itself The abdomen was closed without any attempt at treatment, or at most the ascitic fluid was evacuated It was noted that these cases did better afterwards, and that some fully recovered In 1884 Kœnig advocated laparotomy as a curative measure for peritoneal tuberculosis, and the operation has been done by other surgeons since

TREATMENT OF DISEASES OF THE UTERINE APPENDAGES

Dr William H Humiston of Cleveland, Ohio, read a paper on this subject, in which he said the frequency and importance of diseases of the appendages are recognized by all practitioners of medicine The early recognition of the same is of unusual importance, as by instituting proper treatment at once we save a large percentage of them from a major operation and a prolonged convalescence Simple inflammatory conditions of the tubes and ovaries, before extensive adhesions take place can be successfully treated by rest, boro-glycerid, and iodin tampons, long continued hot water douches, thorough curettement of the uterus, followed by a course of galvanism He had cured a few cases where the ovaries were prolapsed and somewhat adhered, by adding massage to the above treatment But, as a rule, if the case has been neglected until pelvic peritonitis has occurred with its tendency to adhesions and recurrence, we will save many years of suffering, if not life itself, by advising removal of the appendages after a sufficient trial has been given to conservative treatment

Frequently in the puerperal state we have a pelvic peritonitis arise without affecting the tubes, the inflammation spreading directly through the uterus , there is an exudate formed which rest and proper treatment will absorb and leave the appendages strong and healthy, so that later pregnancy takes place and the patient goes on to full term In these cases, if suppuration occur, laparotomy should be advised In tubercular salpingitis the question of removal will depend wholly upon the amount of general systemic infection The author believes that nearly all suppurative diseases of the tubes and ovaries are due to gonorrhea, his experience leading to this belief The doctor closed with a few words on the value of electricity in the treatment of inflammations of the uterus and appendages He values this very highly, and in the catarrhal forms of endometritis in young girls and primiparæ we can obtain a cure if sufficient time is given He applies the positive pole intra-uterine, and the negative in the form of a broad electrode over the whole abdominal region, using a strength of from 20 to 50 milliamperes for five minutes every third day It requires from fifteen to twenty applications to complete a cure

XERODERMA PIGMENTOSUM

Dr A W Brayton of Indianapolis, presented two cases of Kaposi's disease—xeroderma pigmentosum—occurring in the same family The patients are girls, 2½ and 18 years old respectively A brother died of the disease at 9 years of age There are four brothers unaffected All three were affected from the fifth month of infancy Dr Wm S Corlett of Cleveland commented on the cases, of which but fifteen are known in the United States The older girl is kept comfortable by scraping out the tumors upon the hands and face as they appear A tumor the size of a hickory nut upon the eyelid Dr Corlett advised to be removed by electrolysis A lithograph and description of this case was published in the *Journal of Cutaneous and Venereal Diseases* for April, 1892 Dr Brayton also presented a case of non-pigmented sarcoma of the face in a woman 28 years old. The lesions were on the right side of the face, and varied in size from one-eighth to an inch in diameter The larger ones had been destroyed by electrolysis, but returned The growths probably originated from an infantile nævus The microscopic sections accompanying the case showed it to be small celled sarcoma The growths were painful, but not ulcerating, and there is so far no metastasis Dr A Ravogli saw and commented upon this case

Another case also examined by Dr Wm S Corlett was of idiopathic pigmented sarcoma cutis of twenty five years' standing in the person of a physician 75 years of age The growth began below the external malleolus of the left foot After ten years the whole left leg was involved, and five years later the right leg, the left arm and external margin of right ear The tumors vary from the size of a wheat grain to that of a silver dollar and are little elevated above the skin They undergo involution after four or five years, leaving well marked cicatrices This case was also commented on by Dr Corlett It belongs to the extremely rare growth (multiple pigmented sarcoma cutis of Kaposi) described by Dr J A Fordyce in the *Journal of Cutaneous* *and Venereal Diseases*, January, 1891 Dr W A Hardaway reports a case which underwent complete involution after sixteen years, leaving merely an atrophic condition of the skin In the present case the tumors, at first soft, become fibrous and disappear, leaving scars Upon the legs nearly the entire area is involved The health is good The microscope confirms the diagnosis Taylor reports a similar case of this rare affection

A case of lupus mutilons (Hutchinson) in a colored girl 8 years old, existing from infancy, was also shown The entire left arm was scarred by the disease, one finger was diseased to the bone, the thumb was stunted by the disease Dr Corlett remarked of this case that if he had seen it in Cuba he should have regarded it on first sight as a case of leprosy, so closely did the lesions simulate that disease

Section on General Surgery

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The first paper in this Section was read by **Dr H W Loeb** of St Louis, entitled,

SOME ILLUSTRATIVE CASES OF NASAL HEADACHE

The author at the last meeting of the Missouri State Medical Association presented a paper upon nasal headaches in which the following list of such conditions was suggested as possessing an etiological significance in this regard acute inflammations of the nasal mucous membrane, chronic rhinitis, rhinoliths and foreign bodies, septal deformities, deflections, spurs, ridges, diseases of the accessory sinuses, chronic atrophic rhinitis and anything which causes the middle turbinated tissues to press against the septum In headaches of the following characters it was stated that a nasal origin might be expected 1, frontal headaches, 2, hemicrania, starting about the orbit, 3, long continued headaches, 4, headaches of which successive attacks are identical or similar, 5, headaches increased or originated by acute rhinitis, 6, headaches associated with evident disease of the nose or accessory cavities In the present paper the author presented cases which illustrated the characteristics, both symptomatic and causal, as stated in the before mentioned contribution

Dr B Merrill Ricketts of Cincinnati reported several interesting surgical cases, and exhibited photographs of the same

Dr J T Berghoff of St Joseph, Mo, read a paper entitled,

TREATMENT OF FRACTURES OF THE LEG

In treating fractures of the leg, the author said the latter should never rest on the bedding but should be suspended He cares not how well the surgeon may coaptate the broken bone and protect the same with bandages or plaster-of-paris, if the limb rest on the bedding, by each movement of the body of the patient the fracture is bound to move The process of repair is exactly the same in soft tissues and bones Why do we have union by first intention? Because we coaptate the wounds exactly, and keep them so The wound heals sometimes in three days, at the farthest a week But to put the broken limb in an immovable condition and keep it so without great suffering to the patient can not be done under the old system Dr Berghoff then described an apparatus or splint, the outgrowth of patient study for twenty years, but more particularly the last ten years The apparatus is also adapted for treating disease of the hip, knee and ankle joints as the extension can be adjusted as the case requires, the joints being kept immobile

INCURABILITY OF ADVANCED AND EXTREME CASES OF TALIPES EQUINO-VARUS BY THE MEANS AND METHODS IN VOGUE AT THE PRESENT TIME, SUGGESTION OF A WAY TO REMOVE THE DEFORMITY WITHOUT DISTURBING THE USEFULNESS OF THE EXTREMITY

The author of this paper, **Dr Louis Bauer** of St Louis, presented a plaster cast of a talipes equino-varus in which the weight of the body rested upon the dislocated astragalus and calcaneum He produced also the skeleton of a leg and foot of a person who died while in this condition He showed that there was complete dislocation of the astragalus, that the knee joint surfaces had formed between that bone and the calcaneum, whereby the weight of the body rested entirely upon the end of the astragalus and calcaneum, that the scaphoid and other bones of the foot bore little if any part in sustaining the weight of the body It has been found impossible in extreme cases of talipes to restore the foot to its natural position by tenotomy or by *brisement force* In one case, after six years' trial, the doctor had proposed an amputation similar to Chopart whereby all bones anterior to the astragalus were removed The operation would leave a linear scar anterior to the astragalus in its new position and would be out of the way, and in such direction the artificial foot could be easily adjusted He had not had an opportunity of trying this method, but felt sure that this amputation was a proper method in those cases where, after long continued efforts, reduction could not be effected He also reported a case where there was extreme lateral curvature of the spine from distortion of the pelvis in a young musician He became satisfied that the deformity was due to the unnatural position, and therefore directed a long splint applied reaching from the axilla to the foot and the pelvis was gradually pressed toward the splint by an appropriate bandage After a period of time, not stated by the speaker, the patient recovered

In the discussion which followed **Dr Marsee** of Indianapolis, took strong ground against tenotomy, tarsectomy, or amputation in these cases holding the position that by *brisement force* with a wrench or club foot stretcher he could bring the most refractory case into normal position

Dr Wm E Wirt of Cleveland, believes in resection of some of the bones after the method of Phelps in cases where tenotomy or linear osteotomy had proved unavailable

Dr John B Hamilton of Chicago, agreed with Dr Marsee in recommending the use of a club foot stretcher or wrench He would not hesitate to apply a force sufficient to comminute the dislocated astragalus if it were necessary to put the foot in position He had seen no bad results following osteoclasis The difference between osteoclasis, osteotomy or tarsectomy is precisely that between a simple and open fracture In regard to abrasions of the skin, he had not met with any, and strongly preferred osteoclasis

Dr Allan DeVilbiss of Toledo, Ohio, read a paper entitled,

NEW DEVICES FOR CUTTING BONE

Dr DeVilbiss exhibited a surgical motor with various forms of saws and drills, which he developed through a series of practical tests He had used them first upon the dead, afterwards upon the living These instruments were adapted for operation upon the skull, maxillary bone, ribs, nasal bones etc

Dr William E Wirt of Cleveland, Ohio, read a paper on

THE TREATMENT OF OLD CASES OF HIP DISEASE

He said there is no doubt that if convalescent cases of hip disease were carefully and persistently treated during a long period of complete recovery, whatever deformity had existed up to this time and that which accompanies this period, could be entirely overcome without operation When shall a case of hip disease be considered to have progressed far enough to permit the removal of the extension splint and the substitution of a convalescent brace? The solution of this problem was a matter of judgment It is better to allow the extension splint to be worn unnecessarily long than for the substitution to be made too soon

The deformities requiring correction are flexion and adduction Dr Wirt had been surprised in several instances of old cases of hip disease with considerable deformity where, after the application of continuous extension in bed for a few weeks the deformity would be considerably reduced After a trial of extension in bed with a failure to reduce deformity there remains as a means of correction 1, brisement force, with or without myotomy, tenotomy, faciotomy, etc , 2, osteoclasis, 3, osteotomy These operations were then considered by the author under their respective heads Osteoclasis and osteotomy are reserved for those cases in which there exists bony union or a fibrous ankylosis of a very firm character The author reported sixteen cases following Grant's operation

A CASE OF SENILE GANGRENE TREATED BY AMPUTATION

This paper was contributed by **Dr G W H Kemper** of Muncie, Ind The patient was a farmer aged 73 years After detailing the particulars of the case the author drew the following deductions

1 —While the gangrene is confined to one or two toes, it is best to defer amputation If the disease extends to the dorsum of the foot amputation is proper

2 —Amputation below the knee is rarely successful, owing to lack of proper blood supply and tendency to recurrence of gangrene in the stump

3 —Amputation through the thigh will save a large per cent of the cases, and especially so when the subjects are free from a general disease Maunsell-Moullin observes that usually the thigh is small and wasted in the lower

third, the artery is sound in Hunter's canal, the flaps are well supplied with blood, and old people as a rule resent operation very slightly Their tissues are not prone to inflammation

4—When amputation has been performed below the knee, and gangrene appears in the stump, unless the patient is exhausted, it will be proper to perform a secondary amputation above the knee

Dr I N Quimby of Jersey City, N J, read a paper entitled,

A NEW METHOD OF OPERATING AT THE ANKLE JOINT FOR INJURIES OF THE FOOT

The method consists of making a curvilinear incision across the dorsum of the foot, commencing anterior to and a little below the internal malleolus, and terminating at a corresponding point a little below the external malleolus, and then uniting the two extremities of the dorsal section by an incision across the sole of the foot, forming an anterior and posterior flap similar to the operation performed by Pirogoff of Russia After forming a short anterior flap and turning it back, he then dissects out the astragalus from its attachments, being careful to keep close to the bone, then forming a linear posterior flap from the sole of the foot he makes a careful dissection, exposing the anterior half of the calcaneum This being done, and the soft parts being well retracted by an assistant, the saw is applied so as to remove nearly the anterior half of the bone by an incision from above downward and from behind forward The sharp edges of the remaining portion of the bone are then rounded off and the sawed surface is applied directly to the articular surface of the tibia between the malleoli, without removing any part of the cartilaginous surface After stitching up the flap in the usual way a strap of adhesive plaster is applied three or four inches in width extending from the upper portion of the gastrocnemius muscle to a corresponding point on the anterior surface of the leg passing directly over the os calcis, so as to keep closely and firmly in apposition to the articular surface of the tibia, which is kept there until the union of bones has taken place

THE BACTERIA OF THE SURFACE

Dr Frank J Thornbury of Buffalo, read a paper under this title in which the latest researches were set forth, rational mechanical means of disinfection summarized, and the non-utility of antiseptics proclaimed The varieties of organisms which the cutaneous and mucous surfaces present in great abundance comprise molds, yeast fungi, bacilli, cocci, color and odor-producing bacteria The hairy regions, as the axillary space, and the interdigital folds are the places of predilection for the bacteria upon the cutis Myriads of microbes are present in the oral cavity, the intestinal tract, the genital tract of the female, the male urethra, and in the conjunctival secretion and cerumen of the ear Among the masses are germs which are pathogenic, as the Fehleisen streptococcus of erysipelas The cleansing of the surface constitutes one of the most important duties of asepsis This pertains especially to the physician's own hands The disinfection can not be accomplished by the use of antiseptics, so called, which do not even reach the bacteria imbedded in the substrata of fat and dirt The disinfection must be mechanical, dissolving away the glandular secretions, dead epidermal cells vegetable and albuminous substances For the latter purpose soap, hot water and brush are used, aided by alcohol and ether, and rubbing with sterile towels Baths are an important adjunct to asepsis and one or a number should be administered previous to operation

THE ETIOLOGY, DIAGNOSIS AND TREATMENT OF ULCERATION OF THE RECTUM

This subject was dealt with in a general way by **Dr Joseph M Matthews** of Louisville As a matter of convenience he classified these ulcers under four heads benign, malignant, tubercular and specific He said to this division there might be a valid objection based upon correct pathological grounds For instance, in this classification he makes the term, malignant, synonymous with cancer, and yet the tubercular ulcer may in truth be malignant without assuming the characteristics of cancer Again some writers would have us believe that a tuberculous patient is closely akin at least to a syphilitic one or vice versa Benign ulceration is not so frequently found in the rectum as is supposed Whenever the author meets with a well-defined ulceration existing in the rectum, he immediately begins to suspect some special diathesis It is only when the facility of defecation is interfered with that any danger is to be feared The lumen of this portion of the gut is not narrowed by any ordinary causes For these and other causes Dr Matthews has long since been forced to believe that such ascribed causes as pregnancy, dysentery, etc, were not great factors in producing ulceration of the rectum The speaker then dwelt upon malignant ulceration of the rectum, saying that is a favorite seat for cancer Many times the disease is overlooked entirely or diagnosticated as some other affection It has occurred to him several times to have had patients referred to him for some trivial rectal trouble and found cancer instead The more he practices the more he is convinced that syphilis is responsible for fully one-half of the cases of severe ulceration of the rectum The treatment must in every individual case depend upon the known character of it We can not treat a benign ulcer as we would a malignant one, nor a tubercular ulcer as a specific one, nor the last named as the first named Benign growths of the rectum require local applications Malignant, extirpation tuberculous, the curette, syphilitic, anti-syphilitic and local medication, extirpation, colotomy

INGUINAL COLOTOMY

Dr Leon Straus of St Louis, read a paper with this title, in which he entered a plea for more frequent and earlier colotomy in painful malignant diseases of the rectum Dr. Straus stated his reasons for making colotomy as follows 1, it is the greatest modern surgical relief measure, inasmuch as it completely does away with the function of the rectum, thereby relieving the intense pain caused by defecation Pain is an inevitable result in advanced malignant disease of the rectum There are few exceptional cases which only prove the rule, 2, the lease of life is extended There are many instances where it has been considerably extended So great authorities as Cripps, Allingham, and Eiselsberg claim to have extended the lease for weeks or months Are not these most cogent reasons for making a colotomy? 3, the risk of the operation has been minimized Allingham has made sixty eight colotomies with only two deaths, and they were total obstruction cases Cripps forty-eight with one death, this was a total obstruction case Edwards has made sixteen, with one death The patient was very septic at the time of operation Reeves has made sixty-five operations without a death Goodsall has made twenty-two without a death Statistics show a death rate of less than 2 per cent By making early colotomy the author believes that the death rate might be reduced to less than 1 per cent

Dr Wm Thos Corlett of Cleveland, Ohio, read a paper on

THE CLINICAL VARIETIES AND TREATMENT OF PEMPHIGUS

His paper was illustrated by the description of unusual cases The writer divided pemphigus into two main varieties, *pemphigus vulgaris* and *pemphigus foliaceus*, under which all cases, although differing in certain features, may be grouped Under acute pemphigus he gave the history of an epidemic of pemphigus in the newborn The main features were that all the cases occurred in the practice of one midwife, the disease began at the end of the first week, as an erythema on the lower part of the face, or upper part of the chest This was followed by the formation of blebs with flabby walls which soon ruptured leaving extensive raw surfaces About three fourths of the body was involved and terminated fatally about the tenth day The writer regarded it as due to contagion

Under chronic pemphigus, which is the most common form, Dr Corlett drew attention to the frequency with which the mucous membranes were involved and cited a case in which the disease first appeared in the bronchial tubes simulating capillary bronchitis Later it appeared in the mouth and throat, which from its resemblance to diphtheria has been called pemphigus diphtheriticus Finally the disease attacked the eyeballs On the skin it differed in no way from the usual form The case ended in recovery, but with the complete loss of sight

In the treatment, he thought arsenic had been over estimated Iron strychnin and arsenic benefited only as general tonics which were especially indicated in this disease Locally the continuous tepid bath was recommended, but unfortunately it is often impracticable when recourse must be had in simpler measures As soothing applications, the glycerol of tannin, one part to three or four of distilled hamamelis, or water, or the glycerol of lead, one ounce to a pint of water, he thought the best at our command The latter was preferred when but small areas were denuded of epidermis When itching is present a 3 per cent solution *and Venereal Diseases*, January, 1891 Dr W A Hardaway reports a case which underwent complete involution after sixteen years, leaving merely an atrophic condition of the skin In the present case the tumors, at first soft, become fibrous and disappear, leaving scars Upon the legs nearly the entire area is involved The health is good The microscope confirms the diagnosis Taylor reports a similar case of this rare affection

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In treating fractures of the leg, the author said the latter should never rest on the bedding but should be suspended He cares not how well the surgeon may coaptate the broken bone and protect the same with bandages or plaster-of-paris, if the limb rest on the bedding by each movement of the body of the patient the fracture is bound to move The process of repair is exactly the same in soft tissues and bones Why do we have union by first intention? Because we coaptate the wounds exactly, and keep them so The wound heals sometimes in three days, at the farthest a week But to put the broken limb in an immovable condition and keep it so without great suffering to the patient can not be done under the old system Dr Berghoff then described an apparatus or splint, the outgrowth of patient study for twenty years, but more particularly the last ten years The apparatus is also adapted for treating disease of the hip, knee and ankle joints as the extension can be adjusted as the case requires, the joints being kept immobile

INCURABILITY OF ADVANCED AND EXTREME CASES OF TALIPES EQUINO-VARUS BY THE MEANS AND METHODS IN VOGUE AT THE PRESENT TIME, SUGGESTION OF A WAY TO REMOVE THE DEFORMITY WITHOUT DISTURBING THE USEFULNESS OF THE EXTREMITY

The author of this paper, Dr Louis Bauer of St Louis, presented a plaster cast of a talipes equino varus in which the weight of the body rested upon the dislocated astragalus and calcaneum He produced also the skeleton of a leg and foot of a person who died while in this condition He showed that there was complete dislocation of the astragalus, that the knee joint surfaces had formed between that bone and the calcaneum, whereby the weight of the body rested entirely upon the end of the astragalus and calcaneum, that the scaphoid and other bones of the foot bore little if any part in sustaining the weight of the body It has been found impossible in extreme cases of talipes to restore the foot to its natural position by tenotomy or by *brisement force* In one case, after six years' trial, the doctor had proposed an amputation similar to Chopart whereby all bones anterior to the astragalus were removed The operation would leave a linear scar anterior to the astragalus in its new position and would be out of the way, and in such direction the artificial foot could be easily adjusted He had not had an opportunity of trying this method, but felt sure that this amputation was a proper method in those cases where, after long continued efforts, reduction could not be effected He also reported a case where there was extreme lateral curvature of the spine from distortion of the pelvis in a young musician He became satisfied that the deformity was due to the unnatural position, and therefore directed a long splint applied reaching from the axilla to the foot and the pelvis was gradually pressed toward the splint by an appropriate bandage After a period of time, not stated by the speaker, the patient recovered

In the discussion which followed Dr Marsee of Indianapolis, took strong ground against tenotomy, tarsectomy, or amputation in these cases holding the position that by *brisement forcé* with a wrench or club foot stretcher he could bring the most refractory case into normal position

Dr Wm E Wirt of Cleveland, believes in resection of some of the bones after the method of Phelps in cases where tenotomy or linear osteotomy had proved unavailable

Dr John B Hamilton of Chicago, agreed with Dr Marsee in recommending the use of a club foot stretcher or wrench He would not hesitate to apply a force sufficient to comminute the dislocated astragalus if it were necessary to put the foot in position He had seen no bad results following osteoclasis The difference between osteoclasis, osteotomy or tarsectomy is precisely that between a simple and open fracture In regard to abrasions of the skin, he had not met with any, and strongly preferred osteoclasis

Dr Allen DeVilbiss of Toledo, Ohio, read a paper entitled,

NEW DEVICES FOR CUTTING BONE

Dr DeVilbiss exhibited a surgical motor with various forms of saws and drills, which he developed through a series of practical tests He had used them first upon the dead, afterwards upon the living These instruments were adapted for operation upon the skull, maxillary bone, ribs, nasal bones etc

Dr William E Wirt of Cleveland, Ohio, read a paper on

THE TREATMENT OF OLD CASES OF HIP DISEASE

He said there is no doubt that if convalescent cases of hip disease were carefully and persistently treated during a long period of complete recovery, whatever deformity had existed up to this time and that which accompanies this period, could be entirely overcome without operation When shall a case of hip disease be considered to have progressed far enough to permit the removal of the extension splint and the substitution of a convalescent brace? The solution of this problem was a matter of judgment It is better to allow the extension splint to be worn unnecessarily long than for the substitution to be made too soon

The deformities requiring correction are flexion and adduction Dr Wirt had been surprised in several instances of old cases of hip disease with considerable deformity where, after the application of continuous extension in bed for a few weeks the deformity would be considerably reduced After a trial of extension in bed with a failure to reduce deformity there remains as a means of correction 1, brisement forcé, with or without myotomy, tenotomy, faciotomy, etc, 2, osteoclasis, 3, osteotomy These operations were then considered by the author under their respective heads Osteoclasis and osteotomy are reserved for those cases in which there exists bony union or a fibrous ankylosis of a very firm character The author reported sixteen cases following Grant's operation

A CASE OF SENILE GANGRENE TREATED BY AMPUTATION

This paper was contributed by Dr G W H Kemper of Muncie, Ind The patient was a farmer aged 73 years After detailing the particulars of the case the author drew the following deductions

1—While the gangrene is confined to one or two toes, it is best to defer amputation If the disease extends to the dorsum of the foot amputation is proper

2—Amputation below the knee is rarely successful, owing to lack of proper blood supply and tendency to recurrence of gangrene in the stump

3—Amputation through the thigh will save a large per cent of the cases, and especially so when the subjects are free from a general disease Maunsell-Moullin observes that usually the thigh is small and wasted in the lower third, the artery is sound in Hunter's canal, the flaps are well supplied with blood, and old people as a rule resent operation very slightly Their tissues are not prone to inflammation

4—When amputation has been performed below the knee, and gangrene appears in the stump, unless the patient is exhausted, it will be proper to perform a secondary amputation above the knee

Dr I N Quimby of Jersey City, N J, read a paper entitled,

A NEW METHOD OF OPERATING AT THE ANKLE JOINT FOR INJURIES OF THE FOOT

The method consists of making a curvilinear incision across the dorsum of the foot, commencing anterior to and a little below the internal malleolus, and terminating at a corresponding point a little below the external malleolus, and then uniting the two extremities of the dorsal section by an incision across the sole of the foot, forming an anterior and posterior flap similar to the operation performed by Pirogoff of Russia After forming a short anterior flap and turning it back, he then dissects out the astragalus from its attachments, being careful to keep close to the bone, then forming a linear posterior flap from the sole of the foot he makes a careful dissection, exposing the anterior half of the calcaneum This being done, and the soft parts being well retracted by an assistant, the saw is applied so as to remove nearly the anterior half of the bone by an incision from above downward and from behind forward The sharp edges of the remaining portion of the bone are then rounded off and the sawed surface is applied directly to the articular surface of the tibia between the malleoli, without removing any part of the cartilaginous surface After stitching up the flap in the usual way a strap of adhesive plaster is applied three or four inches in width extending from the upper portion of the gastrocnemius muscle to a corresponding point on the anterior surface of the leg passing directly over the os calcis, so as to keep closely and firmly in apposition to the articular surface of the tibia, which is kept there until the union of bones has taken place

THE BACTERIA OF THE SURFACE

Dr Frank J Thornbury of Buffalo, read a paper under this title in which the latest researches were set forth, rational mechanical means of disinfection summarized, and the non-utility of antiseptics proclaimed The varieties of organisms which the cutaneous and mucous surfaces present in great abundance comprise molds, yeast fungi, bacilli, cocci, color and odor-producing bacteria The hairy regions, as the axillary space, and the interdigital folds are the places of predilection for the bacteria upon the cutis Myriads of microbes are present in the oral cavity, the intestinal tract, the genital tract of the female, the male urethra, and in the conjunctival secretion and cerumen of the ear Among the masses are germs which are pathogenic, as the Fehleisen streptococcus of erysipelas The cleansing of the surface constitutes one of the most important duties of asepsis This pertains especially to the physician's own hands The disinfection can not be accomplished by the use of antiseptics, so called, which do not even reach the bacteria imbedded in the substrata of fat and dirt The disinfection must be mechanical, dissolving away the glandular secretions, dead epidermal cells vegetable and albuminous substances For the latter purpose soap, hot water and brush are used, aided by alcohol and ether, and rubbing with sterile towels Baths are an important adjunct to asepsis and one or a number should be administered previous to operation

THE ETIOLOGY, DIAGNOSIS AND TREATMENT OF ULCERATION OF THE RECTUM

This subject was dealt with in a general way by Dr Joseph M Matthews of Louisville As a matter of convenience he classified these ulcers under four heads benign, malignant, tubercular and specific He said to this division there might be a valid objection based upon correct pathological grounds For instance, in this classification he makes the [illegible]rm, malignant, synonymous with cancer, and yet the [illegible]bercular ulcer may in truth be malignant without assuming the characteristics of cancer Again some writers would have us believe that a tuberculous patient is closely akin at least to a syphilitic one or vice versa Benign ulceration is not so frequently found in the rectum as is supposed Whenever the author meets with a well defined ulceration existing in the rectum, he immediately begins to suspect some special diathesis It is only when the facility of defecation is interfered with that any danger is to be feared The lumen of this portion of the gut is not narrowed by any ordinary causes For these and other causes Dr Matthews has long since been forced to believe that such ascribed causes as pregnancy, dysentery, etc, were not great factors in producing ulceration of the rectum The speaker then dwelt upon malignant ulceration of the rectum, saying that is a favorite seat for cancer Many times the disease is overlooked entirely or diagnosticated as some other affection It has occurred to him several times to have had patients referred to him for some trivial rectal trouble and found cancer instead The more he practices the more he is convinced that syphilis is responsible for fully one half of the cases of severe ulceration of the rectum The treatment must in every individual case depend upon the known character of it We can not treat a benign ulcer as we would a malignant one, nor a tubercular ulcer as a specific one, nor the last named as the first named Benign growths of the rectum require local applications Malignant, extirpation, tuberculous, the curette, syphilitic, anti-syphilitic and local medication, extirpation, colotomy

INGUINAL COLOTOMY

Dr Leon Straus of St Louis, read a paper with this title, in which he entered a plea for more frequent and earlier colotomy in painful malignant diseases of the rectum Dr Straus stated his reasons for making colotomy as follows 1, it is the greatest modern surgical relief measure, inasmuch as it completely does away with the function of the rectum, thereby relieving the intense pain caused by defecation Pain is an inevitable result in advanced malignant disease of the rectum There are few exceptional cases which only prove the rule, 2, the lease of life is extended There are many instances where it has been considerably extended So great authorities as Cripps, Allingham, and Eiselsberg claim to have extended the lease for weeks or months Are not these most cogent reasons for making a colotomy? 3, the risk of the operation has been minimized Allingham has made sixty eight colotomies with only two deaths, and they were total obstruction cases Cripps forty-eight with one death, this was a total obstruction case Edwards has made sixteen, with one death The patient was very septic at the time of operation Reeves has made sixty-five operations without a death Goodsall has made twenty-two without a death Statistics show a death rate of less than 2 per cent By making early colotomy the author believes that the death rate might be reduced to less than 1 per cent

Dr Wm Thos Corlett of Cleveland, Ohio, read a paper on

THE CLINICAL VARIETIES AND TREATMENT OF PEMPHIGUS

His paper was illustrated by the description of unusual cases The writer divided pemphigus into two main varieties, *pemphigus vulgaris* and *pemphigus foliaceus*, under which all cases, although differing in certain features, may be grouped Under acute pemphigus he gave the history of an epidemic of pemphigus in the newborn The main features were that all the cases occurred in the practice of one midwife, the disease began at the end of the first week, as an erythema on the lower part of the face, or upper part of the chest This was followed by the formation of blebs with flabby walls which soon ruptured leaving extensive raw surfaces About three fourths of the body was involved and terminated fatally about the tenth day The writer regarded it as due to contagion

Under chronic pemphigus, which is the most common form, Dr Corlett drew attention to the frequency with which the mucous membranes were involved and cited a case in which the disease first appeared in the bronchial tubes simulating capillary bronchitis Later it appeared in the mouth and throat, which from its resemblance to diphtheria has been called pemphigus diphtheriticus Finally the disease attacked the eyeballs On the skin it differed in no way from the usual form The case ended in recovery, but with the complete loss of sight

In the treatment, he thought arsenic had been over estimated Iron, strychnin and arsenic benefited only as general tonics which were especially indicated in this disease Locally the continuous tepid bath was recommended, but unfortunately it is often impracticable when recourse must be had in simpler measures As soothing applications, the glycerol of tannin, one part to three or four of distilled hamamelis or water, or the glycerol of lead, one ounce to a pint of water, he thought the best at our command Th[illegible] latter was preferred when but small areas were denude[illegible] epidermis When itching is present a 3 per cent so of resorcin was recommended Finally when desquamation sets in some emollient, such as the zinc ointment or carbolized vaselin will afford the best relief

KRASKE'S OPERATION WITH REPORT OF CASES

By Dr H O Walker of Detroit, Mich The author of this paper said that a man or woman who had cancer of the rectum was of few days, and the method of relief could be done in three ways—either by proctotomy and scooping away of the growth, by excision of the cancer, or by colotomy, all of which were temporary, as the author had never seen a case of true cancer that ever got well When the malignant growth was high up, say two or three inches above the rectum, the best operation to make would be by Kraske's method, that is, by making an incision down through the second sacral vertebra to the anus to the left of the coccyx, and rapidly stripping off the muscular and ligamentous attachments to the coccyx and cutting them away with the bone forceps and as much of the sacrum as is necessary to expose the growth Then we have a full view for enucleating the growth and excising it It is well known that it is a difficult matter to approximate the ends by suture method, and an idea was forced upon Dr Walker from his knowledge of the Murphy button that with a large button, say two inches in diameter, which he exhibited to the Association, he could approximate the cut ends of the rectum, and by this means prevent the infiltration of fecal matter to approximate the ends by suture method and an idea was forced upon Dr Walker from his knowledge of the Murphy button that with a large button, say two inches in diameter, which he exhibited to the Association, he could approximate the cut ends of the rectum, and by this means prevent the infiltration of fecal matter, which by the other method was an impossibility In this connection, Dr Walker said he had made the first end-to-end approximation by the Murphy button in a case of fecal fistula on the 8th of December, and the patient on whom he had operated made a good recovery and within two weeks was as well as ever, with no evidence of any contraction of the intestine

SOME HERESIES REGARDING PROSTATIC PATHOLOGY

This paper was contributed by Dr G Frank Lydston of Chicago The author said among the many ills which were marked noli me tangere until recent years, and which modern surgery has done much to relieve, prostatic hypertrophy occupies a very prominent position The surgical resources at present at our command were then briefly stated The author is becoming daily more and more firmly convinced that the ideal operation is a combined suprapubic and perineal section performed at an early period He believes that in many cases this early operation will not only forestall circumscribed prostatic obstructions, median or lateral, but will prove directly curative by restoring the normal function of micturition Supra-pubic cystotomy is undoubtedly the best method of draining the bladder, as far as a single operation is concerned, and in many instances it is all sufficient When combined, however, with perineal section, prostatic dilatation and prolonged drainage by a large tube, we often do away with certain conditions which exist in the way of contracted lumen of the prostatic urethra and hyper excitability of this portion of the urinary tract, which supra pubic cystotomy alone might not accomplish

Dr Lydston believes that the main factors in the etiology of prostatic disease are laid down in many cases, if not the majority, before middle life

The surgical address before the general session was given by Dr Henry O Marcy of Boston, the subject having been selected by a request, as that of

INGUINAL HERNIA, ITS ANATOMY AND BETTER METHODS FOR CURE

Dr Marcy illustrated his lecture by a series of slides reproducing the magnificent illustrated work of the old masters—Kamper, Cooper, Scarpi, Bougerey, and others By general consensus of opinion the profession is indebted to Dr Marcy as an innovator in this field of labor He had established the value of the buried animal suture and published his results quite five years before that of Weith of Germany, to whom in Europe the credit is generally attributed The essential principles of his operation for hernia have become universally accepted The result of the work of a large number of the modern operators give from 70 to 90 per cent of permanent cures In resumé, Dr Marcy claims that the peritoneal sac as a rule should be resected after suturing quite to its very base, that the deeper structures which go to make up the posterior wall of the inguinal canal should be reinforced and restored to their original normal condition, that the external wound should be closed without drainage and the skin wound sealed with iodoform collodion In his large experience involving several hundred cases, he states that where the intestine has not been involved from strangulation or other cause, not one of his patients has appeared to approach the danger line, and that of the entire number which he has been able to trace, more than 90 per cent have remained after one year permanently cured

Papers were also read before this section by Drs William N Wishard of Indianapolis, J McLean Moulder of Kokomo, Ind, William T Belfield of Chicago, and others

Committee on Nominations organized by election of Dudley S Reynolds of Louisville, chairman and I N Love, secretary

The following officers were elected for the ensuing year

President—Dr X C Scott of Cleveland, Ohio
First Vice President—Dr Leon Straus of St Louis
Second Vice-President—Dr G Frank Lydston of Chicago
Secretary—Dr Frederick C Woodburn of Indianapolis
Treasurer—Dr George J Cook of Indianapolis
Chairman Com of Arrangements—Dr Thos E Holland of Hot Springs

Hot Springs, Ark, was selected as the next place of meeting Time of meeting, first Tuesday in November

After drafting and adopting resolutions of thanks, the Association adjourned

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Tri-State Medical Association—The Tri-State Medical Association of Arkansas, Tennessee and Mississippi will convene in annual session in Memphis, Tenn, on Nov 22 and 23, 1893

Members of the Association and all regular physicians in good standing are cordially invited to attend

Those intending to contribute papers or report cases of importance occurring in their practice, should notify the Secretary at once, giving title of paper, in order that their names may appear on the program A L Elcan, M D

Secretary, Memphis, Tenn

West Tennessee Medical and Surgical Association will meet at Brownsville, Tenn, Thursday, October 26, at 2 30 p m A session will be held also at night and one on Friday morning, the 27th This arrangement is made to save time, and to avoid night travel Dr I A McSwain is the Secretary

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Mississippi Valley Association Notes—The *Indiana Medical Journal* will in its next issue print the proceedings in full Among the medical editors present we noticed Dr R B Granger of the *New York Medical Journal*, Dr Brayton of the *Indiana Medical Journal*, Dr Culbertson of the *Lancet and Clinic*, Dr I N Love of the *Medical Mirror* of St Louis, Dr G F Lydston of the *Western Medical Reporter* and Dr John B Hamilton of this Journal Dr James F Hibberd the President-elect of the American Medical Association gave the annual address in medicine The reception was held at the Denison House, and Governor Matthews honored the occasion by his presence The Chairman of the Committee of Arrangements, Dr Cook, and the secretary of the Association, Dr Woodburn, have reason to be gratified at the success of the meeting

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Tri State Medical Association of Alabama, Georgia and Tennesses to be held at Chattanooga, Tenn, Oct 17

LIST OF PAPERS

"Membranous Croup with Report of Cases Treated with Tracheotomy" R M Harbin Calhoun, Ga

"Treatment of Stone in the Biliary Duct" W E B Davis, Birmingham, Ala

"Cholecystotomy" Paul F Eve, Nashville, Tenn

"Symptoms and Pathology of Fractures about the Elbow" J B Murfree Murfreesboro Tenn

"Treatment and Prognosis of Fractures about the Elbow" Willis F Westmoreland Atlanta, Ga

"Action of the Galvanic Current on the Uterine Tissue" H Berlin Chattanooga, Tenn

"Pathology of the Sequelæ of Purulent Inflammation of the Middle Ear" T Hilliard Wood, Nashville, Tenn

"Treatment of the Sequelæ of Purulent Inflammation of the Middle Ear" G C Savage, Nashville, Tenn

"The Significance of Albumen in the Urine in Pregnancy" E T Camp, Gadsden, Ala

"Serous or Watery Discharges during Gestation, their Source and Significance" J R Rathmell, Chattanooga, Tenn

"Tuberculosis on the Cumberland Mountains" L P Barbour, Tracy City, Tenn

"Symptoms and Treatment of Gastritis" G T Prince, Whiteside, Tenn

"Treatment of Varicocele" J W Handly, Nashville, Tenn

"Treatment of Pyrexia" J A Witherspoon, Columbia, Tenn

"Recent Observations of Croupous Pneumonia with Special Reference to Prophylaxis and Treatment" R M Cunningham, Birmingham, Ala

'Naso Pharyngeal Adenoids" E L Jones, Chattanooga, Tenn

"Etiology, Pathology and Preventation of Ophthlamia Neonatorum" L B Graddy, Nashville, Tenn

"Treatment of Ophthalmia Neonatorum" B F Travis, Chattanooga, Tenn

"Treatment of Puerperal Mastitis" J W Russey, Chattanooga, Tenn

"Disease of Female Bladder" J C LeGrand, Anniston, Ala

"Treatment of Psoriasis at Hot Springs, Ark, with Report of Cases" J Cabell Minor, Hot Springs, Ark

"Treatment of the Omentum in Hernia Operations" G A Baxter, Chattanooga, Tenn

'Report of Psychical Science Congress, Chicago, August, 1893" John E Purdon, Cullman, Ala

"The Elastic Dressing Applied to Incomplete Anchylosis of the Knee" C W Barrier, Columbus, Ga

"Medical Ethics" J B Cowan, Tullahoma, Tenn

"Tubercular Peritonitis" T J Crofford, Memphis, Tenn

"Movable Kidney" J B S Holmes, Rome, Ga

"Pathology and Treatment of Goitre" W C Townes, Chattanooga, Tenn

President's Address "Responsibilities of the Abdominal Surgeon" Richard Douglas, Nashville, Tenn

ASSOCIATION NEWS

The Journal of the American Medical Association —"Since the meeting of the Medical Association at Milwaukee, we have watched this journal with unusual interest, because its new editor was not only so well known to the profession at large, but also because he came from our own city, and, therefore any success he might achieve would reflect, so we argued, credit upon the city from which he came That Dr Hamilton has fulfilled the highest expectations of his friends goes without saying The profession should take great pride in making this journal its representative both at home and abroad We are equal in every way to our friends across the water, and there is no reason why, in the matter of a representative journal, we should not certainly equal, if not excel them That the JOURNAL will do this under the editorial management of Dr Hamilton we firmly believe But he must be supported, of course, by the whole profession This can not be done in any better way, than by sending the annual subscription of $5 00 to the JOURNAL, at 68 Wabash Avenue, Chicago"—*Food*, October,1893

NECROLOGY

Dr Edward Warren Bey, whose death has recently been announced, has for nearly twenty years been one of the leading physicians of Paris, and of world wide reputation He was born in Tyrrell County, North Carolina, Jan 22, 1828 His parents were natives of Virginia His father, Dr Wm C Warren was a man of intelligence and good professional attainments When the subject of this sketch was but 4 years of age his father removed with his family to Edenton, N C When of a proper age the boy was sent to the Fairfax Institute, near Alexandria, where he remained for two years, and was then placed at the University of Virginia, where he won honors and received diplomas, and by selection delivered the valedictory before the Jefferson Society In 1851 he graduated from the Jefferson Medical College in Philadelphia

It is stated by one of his biographers that while pursuing his studies in Philadelphia he conceived the idea of administering morphin under the skin for the relief of pain by puncture with Anel's syringe He had written his thesis for graduation on this method of administering medicines, but mentioning it to one of the faculty, who looked upon it as chimerical and dangerous, he was dissuaded from presenting the paper and wrote one on another subject He had, however, become so thoroughly convinced of the practicability of the method that he soon after put it to a practical test, and was some four years in advance of the public announcements of this very useful method of administering remedies

To farther prosecute his medical studies he spent most of the years 1854 and 1855 in attending the hospitals and clinics of Paris, and during this time formed strong and lasting friendships with many of the leading medical men of France He was a ready and a graceful writer, and contributed from the French capital a number of very acceptable articles to the *American Journal of Medical Sciences* and to other American medical publications

On returning to the United States he settled to practice in Edenton, N C He was thoroughly well equipped to practice medicine and speedily acquired a leading position among the medical men of the region In 1856 he was selected to deliver the annual address before the State Medical Society, which was well received and brought him prominently before the active workers in the professional ranks The same year he obtained the "Fish Fund Prize" for an essay on the "Effects of Pregnancy on the developing of Tuberculosis" This paper has passed into the permanent literature of medicine In 1857 he was elected editor of the *North Carolina Medical Journal*, at the time the official organ of the State Medical Society The Gynecological Society of Boston the same year elected him a member While in Paris he became a member of the "American Medical Society of Paris," and this organization sent him as their delegate to the American Medical Association, but he was unable to attend or register But he was a delegate from the State Medical Society of North Carolina to the meeting of the American Medical Association at Louisville, Ky, in 1859 He also attended meetings from Baltimore, Md, where he was then practicing, in 1860, 1866, 1868, 1870 and 1872

Dr Warren was on Nov 16, 1857 united in marriage to Miss Elizabeth Cotton Johnston of Edenton, a most estimable lady whose ancestors were extensively connected with many distinguished families in the old North State and in Virginia

Dr Warren's reputation for learning and scientific acquirements had become so widely known in 1860, that he was elected professor of materia medica and therapeutics in the old and prosperous University of Maryland This led to his removal to the city of Baltimore The same year he was elected the first vice-president of the convention for the revision of the United States Pharmacopeia In the University of Maryland he at once took high rank as an able teacher and an attractive lecturer

On the breaking out of the war between the States he threw his fortunes with his native State and his friends in the South He served in the field, in hospitals and on medical boards He was chief surgeon in the North Carolina of resorcin was recommended Finally when desquamation sets in some emollient, such as the zinc ointment or carbolized vaselin will afford the best relief

KRASKE'S OPERATION WITH REPORT OF CASES

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Members of the Association and all regular physicians in good standing are cordially invited to attend

Those intending to contribute papers or report cases of importance occurring in their practice, should notify the Secretary at once, giving title of paper, in order that their names may appear on the program A L Elcan, M D
Secretary, Memphis, Tenn

West Tennessee Medical and Surgical Association will meet at Brownsville, Tenn, Thursday, October 26, at 2 30 p m A session will be held also at night and one on Friday morning, the 27th This arrangement is made to save time, and to avoid night travel Dr I A McSwain is the Secretary

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Mississippi Valley Association Notes—The *Indiana Medical Journal* will in its next issue print the proceedings in full Among the medical editors present we noticed Dr R B Granger of the *New York Medical Journal*, Dr Brayton of the *Indiana Medical Journal*, Dr Culbertson of the *Lancet and Clinic*, Dr I N Love of the *Medical Mirror* of St Louis, Dr G F Lydston of the *Western Medical Reporter* and Dr John B Hamilton of this Journal Dr James F Hibberd the President-elect of the American Medical Association gave the annual address in medicine The reception was held at the Denison House, and Governor Matthews honored the occasion by his presence The Chairman of the Committee of Arrangements, Dr Cook, and the secretary of the Association, Dr Woodburn, have reason to be gratified at the success of the meeting

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Tri-State Medical Association of Alabama, Georgia and Tennesses to be held at Chattanooga, Tenn, Oct 17

LIST OF PAPERS

"Membranous Croup with Report of Cases Treated with Tracheotomy" R M Harbin Calhoun, Ga
"Treatment of Stone in the Biliary Duct" W E B Davis, Birmingham, Ala
"Cholecystotomy" Paul F Eve, Nashville, Tenn
"Symptoms and Pathology of Fractures about the Elbow" J B Murfree Murfreesboro Tenn
"Treatment and Prognosis of Fractures about the Elbow" Willis F Westmoreland Atlanta, Ga
"Action of the Galvanic Current on the Uterine Tissue" H Berlin Chattanooga, Tenn
"Pathology of the Sequelæ of Purulent Inflammation of the Middle Ear" T Hilliard Wood, Nashville, Tenn

"Treatment of the Sequelæ of Purulent Inflammation of the Middle Ear" G C Savage, Nashville, Tenn

"The Significance of Albumen in the Urine in Pregnancy" E T Camp, Gadsden, Ala

"Serous or Watery Discharges during Gestation, their Source and Significance" J R Rathmell, Chattanooga, Tenn

"Tuberculosis on the Cumberland Mountains" L P Barbour, Tracy City, Tenn

"Symptoms and Treatment of Gastritis" G T Prince, Whiteside, Tenn

"Treatment of Varicocele" J W Handly, Nashville, Tenn

"Treatment of Pyrexia" J A Witherspoon, Columbia, Tenn

"Recent Observations of Croupous Pneumonia with Special Reference to Prophylaxis and Treatment" R M Cunningham, Birmingham, Ala

'Naso Pharyngeal Adenoids" E L Jones, Chattanooga, Tenn

"Etiology, Pathology and Preventation of Ophthlamia Neonatorum" L B Graddy, Nashville, Tenn

"Treatment of Ophthalmia Neonatorum" B F Travis, Chattanooga, Tenn

"Treatment of Puerperal Mastitis" J W Russey, Chattanooga, Tenn

"Disease of Female Bladder" J C LeGrand, Anniston, Ala

"Treatment of Psoriasis at Hot Springs, Ark, with Report of Cases" J Cabell Minor, Hot Springs, Ark

"Treatment of the Omentum in Hernia Operations" G A Baxter, Chattanooga, Tenn

"Report of Psychical Science Congress, Chicago, August, 1893" John E Purdon, Cullman, Ala

"The Elastic Dressing Applied to Incomplete Anchylosis of the Knee" C W Barrier, Columbus, Ga

"Medical Ethics" J B Cowan, Tullahoma, Tenn

"Tubercular Peritonitis" T J Crofford, Memphis, Tenn

"Movable Kidney" J B S Holmes, Rome, Ga

"Pathology and Treatment of Goitre" W C Townes, Chattanooga, Tenn

President's Address "Responsibilities of the Abdominal Surgeon" Richard Douglas, Nashville, Tenn

ASSOCIATION NEWS

The Journal of the American Medical Association —"Since the meeting of the Medical Association at Milwaukee, we have watched this journal with unusual interest, because its new editor was not only so well known to the profession at large, but also because he came from our own city, and, therefore, any success he might achieve would reflect, so we argued, credit upon the city from which he came That Dr Hamilton has fulfilled the highest expectations of his friends goes without saying The profession should take great pride in making this journal its representative both at home and abroad We are equal in every way to our friends across the water, and there is no reason why, in the matter of a representative journal, we should not certainly equal, if not excel them That the JOURNAL will do this under the editorial management of Dr Hamilton we firmly believe But he must be supported, of course, by the whole profession This can not be done in any better way, than by sending the annual subscription of $5 00 to the JOURNAL, at 68 Wabash Avenue, Chicago"—*Food*, October,1893

NECROLOGY

Dr Edward Warren Bey, whose death has recently been announced, has for nearly twenty years been one of the leading physicians of Paris, and of world wide reputation He was born in Tyrrell County, North Carolina, Jan 22, 1828 His parents were natives of Virginia His father, Dr Wm C Warren was a man of intelligence and good professional attainments When the subject of this sketch was but 4 years of age his father removed with his family to Edenton, N C When of a proper age the boy was sent to the Fairfax Institute, near Alexandria, where he remained for two years, and was then placed at the University of Virginia, where he won honors and received diplomas, and by selection delivered the valedictory before the Jefferson Society In 1851 he graduated from the Jefferson Medical College in Philadelphia

It is stated by one of his biographers that while pursuing his studies in Philadelphia he conceived the idea of administering morphin under the skin for the relief of pain by puncture with Anel's syringe He had written his thesis for graduation on this method of administering medicines, but mentioning it to one of the faculty, who looked upon it as chimerical and dangerous, he was dissuaded from presenting the paper and wrote one on another subject He had, however, become so thoroughly convinced of the practicability of the method that he soon after put it to a practical test, and was some four years in advance of the public announcements of this very useful method of administering remedies

To farther prosecute his medical studies he spent most of the years 1854 and 1855 in attending the hospitals and clinics of Paris, and during this time formed strong and lasting friendships with many of the leading medical men of France He was a ready and a graceful writer and contributed from the French capital a number of very acceptable articles to the *American Journal of Medical Sciences* and to other American medical publications

On returning to the United States he settled to practice in Edenton, N C He was thoroughly well equipped to practice medicine and speedily acquired a leading position among the medical men of the region In 1856 he was selected to deliver the annual address before the State Medical Society, which was well received and brought him prominently before the active workers in the professional ranks The same year he obtained the ' Fish Fund Prize" for an essay on the "Effects of Pregnancy on the developing of Tuberculosis" This paper has passed into the permanent literature of medicine In 1857 he was elected editor of the *North Carolina Medical Journal*, at the time the official organ of the State Medical Society The Gynecological Society of Boston the same year elected him a member While in Paris he became a member of the "American Medical Society of Paris," and this organization sent him as their delegate to the American Medical Association, but he was unable to attend or register But he was a delegate from the State Medical Society of North Carolina to the meeting of the American Medical Association at Louisville, Ky, in 1859 He also attended meetings from Baltimore, Md, where he was then practicing, in 1860, 1866, 1868, 1870 and 1872

Dr Warren was on Nov 16, 1857 united in marriage to Miss Elizabeth Cotton Johnston of Edenton, a most estimable lady whose ancestors were extensively connected with many distinguished families in the old North State and in Virginia

Dr Warren's reputation for learning and scientific acquirements had become so widely known in 1860, that he was elected professor of materia medica and therapeutics in the old and prosperous University of Maryland This led to his removal to the city of Baltimore The same year he was elected the first vice president of the convention for the revision of the United States Pharmacopeia In the University of Maryland he at once took high rank as an able teacher and an attractive lecturer

On the breaking out of the war between the States he threw his fortunes with his native State and his friends in the South He served in the field, in hospitals and on medical boards He was chief surgeon in the North Carolina

Navy and medical director of the Cape Fear section He was also for a time the chief medical inspector of the Department of Northern Virginia He was twice promoted for his efficiency and courage on the field of battle This trait of efficiency in the doctor was so notable as to attract attention, and the fact coming to the attention of the Assembly of North Carolina, an Act was passed by them raising his rank from that of colonel to that of brigadier general for "efficient services rendered to sick and wounded"

Notwithstanding the engrossing official and professional duties of Dr Warren during the war, he wrote a work to meet the needs of surgeons in the field, entitled, "Surgery for Field and Hospital" In this publication, which was well received and speedily passed through two editions, the doctor made some valuable original suggestions In 1865, Dr Warren resumed his residence in Baltimore, expecting at the same time to resume his professional duties in the University of Maryland But the changed conditions of the country and the status of the Southern States, the policy of the general government and local interests combined to close the doors of that institution against him

He was not only capable but ambitious and full of energy, and it was mainly at his suggestion and through his efforts that the old Washington University Medical School was revived and rapidly rose to have a commanding position and an able faculty and good patronage In this faculty Dr Warren filled most acceptably the chair of surgery

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Dr Warren both as a boy and through his life proved his indomitable energy and power of work He secured a large share of confidence with his professional brethren And yet like all men of force and original ideas, antagonisms were evolved by the friction That he was a man of ability and culture his life and works attest His house in Paris was frequented by Americans and travelers from other countries, and his attentions and hospitalities for years generously bestowed upon numerous friends visiting Paris

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MISCELLANY

Meeting of the State Board of Health of Michigan —The following members were present at the meeting of the State Board of Health at the capital, Sept 29-30, 1893 President Wells, Secretary Baker, Drs Granger and Milner, and Prof Fall A very important resolution offered by Dr Baker was unanimously adopted, placing consumption on the list

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427 So 16th St, Philadelphia, Pa

MISCELLANY

Meeting of the State Board of Health of Michigan —The following members were present at the meeting of the State Board of Health at the capital, Sept 29-30, 1893 President Wells, Secretary Baker, Drs Granger and Milner, and Prof Fall A very important resolution offered by Dr Baker was unanimously adopted, placing consumption on the list of "dangerous communicable diseases" required by law to be reported by physicians and householders This means that henceforth this "great white plague" which causes far more deaths in Michigan than any other disease, is to be restricted in its ravages This important move by the Board calls for the most earnest cooperation of health officers, physicians and the people generally The resolution is as follows

Resolved, That hereafter, consumption (and other diseases due to the *bacillus tuberculosis*) shall be included in the official list of "diseases dangerous to the public health" referred to in sections 1675 and 1676, Howell's Statutes, requiring notice by householders and physicians to the local health officer, as soon as such a disease is recognized

The reporting of other dangerous diseases to the State Board has enabled it to place pamphlets of instructions just where they would do most good, and at the right time Many years of experience show that restrictive measures recommended by the State Board of Health, relative to dangerous diseases have been the direct means of great reductions in the death rates of dangerous diseases, in some instances the death rate is only about half what it was before the State Board of Health undertook restrictive measures If consumption were reported, it could be dealt with in the same manner and restricted, and many cases of consumption avoided every year It is a disease easily restricted, and the State Board of Health distributes a pamphlet telling just how to do it If the physicians and citizens of Michigan will do with consumption as they have done in the past with other dangerous diseases, and cooperate with the health officers, much suffering and loss of life can be prevented

In connection with the subject of reprinting the leaflet on the restriction of dangerous contagious diseases, in several different languages for distribution to neighbors of persons sick with a dangerous disease, Drs Granger and Milner, the recently appointed members of the Board, had for years watched with interest the good work that these instructive pamphlets had been doing in the restriction and prevention of the several diseases The Board directed the secretary to reprint this leaflet in several different languages Dr Granger said that many of our recently arrived foreigners did not believe that some of these diseases were dangerous, and that this leaflet was just what was wanted to educate this class of people, because diphtheria and other diseases were spread among them and by them to other classes of people

The Board amended its rules for the inspection of immigrants at the Michigan border by adding to Rule 1, "and no immigrant shall come into this State or travel within the State, until inspected under these rules, and until authorized to do so by an inspector appointed or accredited by the Michigan State Board of Health"

Rule 5 was amended so as to hold immigrants until their baggage has been disinfected

An additional rule was adopted as follows

Rule 7—Dangerous communicable diseases being now present in every country from which immigrants are coming into Michigan, no immigrant and no traveler or other person believed by the State Board of Health or by its authorized inspector to have been exposed to and liable to convey cholera, diphtheria or other dangerous communicable disease, shall pass through Michigan, or from one township, city or village to another within the State, without permission from the State Board of Health or its authorized inspector

The following resolution, offered by Dr Granger, was unanimously adopted

Resolved, That it is the will of this Board that the President and Secretary continue to take such action as may be necessary to enforce the rules of this Board and to enforce quarantine at the Michigan border and within the State against diseases dangerous to the public health, and to compel any railroad company operating within the State to obey the State laws and the rules and regulations of the State Board of Health made under the law

Gelsemium in Rheumatism and Neuralgia—In an article with the above title by Dr A Atkinson (*Charlotte Medical Journal*, July, 1893) the author says "Often the trouble in administering the stronger fluid extracts and tinctures lies in the fact that the alcohol will evaporate and the extractive material will gum up and fall to the bottom and the sides of the bottle, and though you may administer a properly assayed article, you will now and then get too much of the active principle and trouble will follow, then, too, people keep medicines too long and they become uncertain and irregular in their action It is safe in administering strong drugs when we can readily procure the alkaloid safely and properly adjusted, to prescribe the article put up by some reliable manufacturer, seeing that it has not been kept too long, and such active drugs are accurately and beautifully put on the market in a soluble form, and even though we have a granule which presents all the appearance of freshness and complete solubility, a good plan is to put it in water a few minutes before administering it or to stick a hole in it and let the patient swallow it in a half softened state There is no question but that the gelsemium will afford relief in many cases of neuralgia, but it must be pushed far enough to secure its physiological effects, just short of injury, if we expect to obtain full relief In facial neuralgia Massini has found that 20 minims every half hour, for three doses almost invariably cures This we would call getting its full effects—1 dram of the tincture in one hour and a half"

Dr Thomas Hoover of the Ohio State Board of Health has proposed a "pure water" plan for the consideration of that body, which is just now giving considerable attention to the question of supplying Ohio cities with healthful water He proposes to have the State take charge of the water supply and furnish all *important* cities and towns by a system of canals fed by Lake Erie

He will not make diplomas for the next three months—Dr. Walter May Rew, whose bogus medical college was exposed last July, was sentenced October 10 to three months imprisonment in the penitentiary

He will be Missed—Dr A K Bond has resigned the editorial chair of the *Maryland Medical Journal*

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from September 30, 1893 to October 6 1893

Capt William D Crosby Asst Surgeon, is granted leave of absence for three months By direction of the Secretary of War

Majors Alfred A Woodhull and Alfred C Girard Surgeons, are detailed as delegates to represent the Medical Department of the Army at the annual meeting of the American Public Health Association, to be held in Chicago, Ill, from the 9th to the 14th of October, 1893

LETTERS RECEIVED

(**A**) Antikamina Chemical Co St Louis Mo, Adams A S, Rochester, Minn, Anderson, O C M., Andover Ill Ayers, D, Syracuse, N Y, (**B**) Bacon, C G Fulton, N Y Battle & Co St Louis Mo Bernd H & Co, St Louis Mo, Brayton, A W Indianapolis, Brown M R Chicago, Ill (**C**) Cook G F Oxford, Ohio Cutter, E, New York City, Chancellor, E, St Louis Christian E T, Wyandotte, Mich (**D**) Dodd's Newspaper Advertising Agency, Boston Mass Drevet Mfg Co New York City, DuBase, Robt M Sewanee, Tenn Dudley E C, Chicago Ill, Dunglison, R J Philadelphia, Pa (**F**) Farnham A B, Milwaukee, Wis, Fairchild Bros & Foster, New York City (**G**) Gihon, A H, Washington D C Gibson Maris, Wilkesbarre Pa, Griffith, L W Bristol, England (**H**) Horwitz, Orville, Philadelphia, Pa Hopkins T. S Thomasville, Ga Hamburg American Packet Co, New York City Herrick, J B, Chicago Ill Hay, Thomas, Philadelphia Pa Holmes, Bayard Chicago (**K**) Kramer, S P, Cincinnati Ohio (**L**) La Garde, L A, U S A Lundgren C E, Jamestown, N Y Lea Bros, Philadelphia, Pa, Leffingwell, E D, Watkins N Y Lydston Jas A Chicago, Ill, (**M**) Mercer, A C, Syracuse, N Y Martin A A & Son, Brookline Boston Mass Morton, T J, Philadelphia Pa Mariani & Co New York City Mulford H K Company, Philadelphia, Pa, Marshall Printing Co, Marshalltown Iowa Moyer, H N Chicago Ill, 2 (**N**) Niles S R, Newspaper Adv Agency, Boston, Mass, (**P**) Purvis, C B, Washington, D C Parke, Davis & Co Detroit, Mich Park Roswell Buffalo N Y Powell R H, Benson W Va (**R**) Risley, S D Philadelphia Pa, Rowell, Geo P & Co New York City (**S**) Slocum, H A., Philadelphia Pa, Summary The Editor Elmira, N Y Stowell, C H New York City Scheiffelin, W H & Co, New York City, 2 Stearns Fred & Co Detroit Mich Schaeffer, E M, Georgetown D C Sharp & Dohme New York City Stephenson & Foster Co Pittsburg Pa Slav Bros New York City Somers, G B, San Francisco Cal Steiger E & Co, New York City (**T**) The Tilden Co, New Lebanon N Y Tuley H E, Louisville, Ky (**U**) Upjohn E F West Randolph, Vt (**V**) Voldeng M N Independence, Iowa Venemann, R T Cannelton Ind Vetter J C & Co, New York City (**W**) Witthous R A New York City Webb J A, Monon Ind Webb M S 'Florida on Wheels no address, Widman, J F, McGregor, Iowa Wilkinson, A D., Denison, Iowa

The Journal of the
American Medical Association

Vol XXI CHICAGO, OCTOBER 21, 1893 No 17

ADDRESS

SANITARY ADMINISTRATION

Read in the Section on State Medicine, at the Forty fourth Annual Meeting of the American Medical Association

BY C A LINDSLEY, M D
CHAIRMAN OF SECTION ON STATE MEDICINE

The value of health to the family, to the community and to the nation has come to be understood and appreciated as it never was before During the last few decades public sanitation has made surprising progress The positive discoveries relating to the protection and preservation of health have proved their verity by their practical application, and have strengthened the claim of public hygiene to be ranked among the applied sciences In scarcely any department of human progress have the indications of successful accomplishment been more marked, more satisfactory, or of greater direct value to the welfare and happiness of mankind, than in the unfolding and development of the principles and natural laws upon which modern scientific public hygiene is based

Let us take a retrospective glance at the beginning of a movement which is still progressing with an undiminished impetus In the East End of London, known as Whitechapel, recently made notorious by several brutal murders, at a place situated on the borders of a large and stagnant pond there occurred in 1838 a severe outbreak of disease The abruptness, the violence and the limits of the epidemic clearly indicated some local cause The late Edwin Chadwick, who had already made an enviable reputation as an original thinker and as a man of rare judgment and great executive ability, was applied to by the parochial authorities for advice He was at the time the Secretary of the Poor Law Board He readily persuaded his Board to institute a medical commission, and himself selected its members He directed the character and extent of the investigation He did not limit it to the existing epidemic, but made it to include the sanitary condition of the whole city of London The judgment and foresight of Edwin Chadwick were never more conspicuously exhibited than in all this proceeding 1, in the selection of the commission, who were among the most competent of living men, 2, in seizing the occasion as an object lesson to impress the public mind with the importance of public hygiene

The gravity of the outbreak justified the procedure and the man and the opportunity came together [1]No commission of this character had ever before been formed The exhaustive and instructive reports which were made, detailing with eloquent accuracy and fearless plainness of speech the shameless pollution of the water supply, and other dangerous influences to which the people in the chief city of the world were exposed, greatly aroused public attention "These reports," says B W Richardson, "became texts in sanitation, and were so much in demand that many thousands were distributed among the people" It was the beginning of public interest in sanitary reform It made an impression that could not be readily effaced It was not only instructive, but it was also very suggestive And the suggestions presently became active realities Thus, if diseases result from unwholesome surroundings, with what diseases are such conditions most associated?

The next step came naturally, but only as such great movements do, after much effort and by powerful influence, but it came, to-wit the registration of the causes of death This result to-wit the enactment of the registration law of the causes of death, can be directly traced to the influence of the reports on the outbreaks of the epidemic in the East End of London in 1838 It gave to the world its most splendid statistician, Dr William Farr, who for more than forty years was the genius who directed and utilized the registration of the vital statistics of England

In these two points we have the foundation of practical public hygiene, two cardinal principles, viz sanitary inspection and the registration of the causes of death It is not necessary in this presence to trace the progress of public sanitation from that time to the present We all know something of the rapid growth in practical methods, and of the marvelous results which they have accomplished

The prominent idea which it is my aim to develop to day is, that in this country, that is, in our own United States, the practice of public hygiene lags far behind the theory and the science of it In the old and long established governments of Europe, the advantages derived from science take effect earlier than they do in this country The people there are more accustomed to trust and obey the powers that be than they are here Here, if the people have not the gratification of trying to turn out all the incumbents of public offices every year they feel that they are not enjoying all the privileges of a free country Then again, the doctrine of self-government among us is carried to an extreme degree in practice, so that the principle of the greatest good to the greatest number is often sacrificed to the claim that every community, however small, has the right to govern itself in all matters pertaining to local interests, and the health of a community is still too often regarded as preeminently a matter of only local interest

Hence in some States, especially in my own, the sanitary administration is divided into just as many little sovereignties as there are local governments of any kind Every town, every borough and every city in Connecticut has its own health authorities, each having jurisdiction over their own little territory, and each making sanitary regulations and exercising their powers entirely independently and without any reference to adjoining similar dynasties. They are under no common direction and have no uniform system of practice. This might not be so unfortunate in its results if unsanitary influences and contagions were accustomed to show any respect for town authorities or city limitations. Now it is quite obvious, on a little reflection, that very serious consequences will naturally result from these queer conditions. One exceedingly unfavorable effect is this: it rarely happens that the limited jurisdiction of a health officer affords him occupation enough to give him a reasonable support. He, therefore, in the great majority of instances regards his official duties as secondary in importance and, consequently, they are usually performed only in a perfunctory manner, or not at all, and often these offices are only accepted by men of inferior ability.

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[1] The Health of Nations vol 1 p xliii

Again, the uncertain tenure of office, from the frequent popular elections for the usual term of only one year, tends to prevent the incumbent from acquiring any enthusiasm or interest in his work. Still again, the public mind either assumes that no special skill or fitness for the office is necessary, or else that the possession of such skill and fitness is universal, and as the office is not usually remunerative, it is not apt to be accepted by competent citizens or else it is made an appendage, ex officio to some other office, the functions of which may not have the most remote relationship to the proper qualifications and duties of the sanitary officer. This clearly indicates a want of proper appreciation on the part of the public of the true functions of such an officer and of their importance.

Sanitary administration, whether in a rural or an urban community, deals with the highest interests of man in the social state, it aims to provide a safeguard to every individual, and protect him from the perils inherent to life in communities, it is one of the chief factors in the promotion of public prosperity and general happiness. For there is nothing so disastrous to the public welfare, nothing so productive of personal misery and suffering, as disease and death. A nation physically feeble, and whose people are subject to frequent epidemics can not be prosperous, it can not be happy. When, therefore, we reflect upon these facts, the apathy and indifference of the public to this subject is cause for profound surprise. "For life is not to live, but to be well," said Martial, an epigrammatic poet of the first century.

The principles of self-government which these little towns feel that it is an injustice to be deprived of, are not rightly comprehended by the popular mind. If government is needed at all, it is highly desirable that those who are governed shall get all the advantages possible from the restrictions imposed upon them. Hence when different communities in neighboring towns and cities have a common interest in the results of government, it would seemingly go without saying, that there should be some common adjustment and unification of the code of laws in which they are all mutually concerned. It has long been recognized by wise legislators, "that every branch of administration needs a central direction, which holds in its hands all the threads of the different local portions." Isolated, separate, independent self-governments, by towns and municipalities, have no cohesiveness or uniformity of methods. They lack the advantage of guidance by a central authority, which with a comprehensive acquaintance with their common, as well as their individual needs, can weld together and wisely direct and control their sanitary work.

The practical sanitation of to day has outgrown the lethal methods which have been so long in vogue. The pressing needs of the times in regard to the conservation of public health, are that such radical changes shall be made, in old ways of sanitary administration, as will enable the most economical and efficient application of the laws of sanitary science. Sanitary administration is sometimes designated "State medicine," by which may be understood that function of the State, in the exercise of which it aims to put the people of the State in such relation with themselves and their environment, in all things affecting their health, that they will need to take the minimum amount of medicine. This implies a general and comprehensive system for the State, with a central authoritative supervision and control of subordinate officials. A central administration, in which the same thing will be always done in much the same way in any part of the State where it is needed to be done at all, would be a vastly different thing from the too prevalent practice in many places of what might be called "town medicine," in contrast with "State medicine." Town medicine, in which each town is an independent, isolated and disjointed government whose appreciation of the principles of public hygiene are as narrow as the limit of its own little territory, and whose policy is "Not to act until obliged to do so, and then to do as little as possible."

The inefficiency, the waste of energy, the want of applied intelligence, or worse, energy misapplied through ignorance, all condemn town medicine as inadequate, expensive and largely barren of results. Public hygiene deals not alone with local conditions. It has to do with the welfare of populations settled over wide areas of territory, and under such varying conditions that the common good of the whole can not be attained without a comprehensive acquaintance of the mutual relations and interests which the separate towns or communities within those areas may bear each other. Town medicine as such is obsolete, belongs to a by-gone age and should no longer assume a responsibility for which in the nature of things it is incompetent.

The true function of town sanitary administration in the future is in the capacity of a component part of a general comprehensive system, guided and directed in its general work by a central authority, upon plans and methods devised with reference to the best good of all the communities interested. In this way, not only will the particular town be benefited, but it will derive a great reflex benefit from the better sanitary condition of all surrounding towns. Sanitary science is of recent growth, but its growth has been vigorous and healthy. Treatises on public hygiene have been written since the days of Hippocrates, but it is only within the last two decades that accumulating knowledge has crystallized in form and taken a scientific character. In the words of Dr. Guy: "It has to do with persons of every rank, of both sexes, of every age. It takes cognizance of the houses and places in which they live; of their occupations and modes of life; of the food they eat, the water they drink, the air they breathe. It follows the child to school, the laborer and artisan into the field, the mine, the factory, the workshop, the sick man into the hospital, the pauper into the workhouse, the lunatic to the asylum, the thief to the prison. It is with the sailor in his ship, the soldier in his barrack, and it accompanies the emigrant to his new home beyond the seas. To all these, it makes application of a knowledge remarkable for its amount, and the great variety of sources whence it is derived. To physiology and medicine it is indebted for what it knows of health and disease, it levies large contributions on chemistry, geology and meteorology, it cooperates with the architect and engineer, its work commends itself to the moralist and divine."

Sanitation has advanced beyond the mere suppression of those grosser nuisances which conspicuously offend the senses, and are so often the subjects of complaints between neighbors. The deadly maladies like typhoid fever, cholera, consumption, etc., do not announce their presence to their victim by appreciable signals, until they have passed the guards and have gained possession of the citadel. They do not herald their approach by any impression on the sense of sight or smell, of taste or touch, but they silently enter, intrench themselves in our vitals, and begin their fatal work before we are conscious of their presence. But modern sanitation has put detectives on their track who have traced them to their lurking places, have studied their career and written their biographies. We know now, somewhat, where to find these secret foes, through what avenues they make their attack, and can in corresponding measure defend ourselves. But the system of defense involves a wider field of operations than the limits of a town or city, and a higher standard of official ability and special training than can reasonably be expected to be possessed by the average town selectman or village justice.

The exponent of practical hygiene in the future must be not only a physician and microscopist, but also a chemist, bacteriologist and geologist. All these sciences come into active demand in the exercise of the functions of a sound and efficient sanitary administration. It is quite obvious, from the rarity and character of these requirements, that they can not be economically employed separately and independently by small communities, living within limited areas of territory. Such communities would not often possess the men competent for such service, and would be unable to afford the remuneration which so high a standard of qualifications could justly demand. Moreover the principles of modern sanitary administration are of universal application, and therefore every consideration of expediency, as well as of economy, would lead to the utilization of acquired knowledge and trained skill by as large a constituency as is practicable.

It rarely happens that the health and well being of a town or even a community are *dependent upon* conditions which are wholly self-contained. In the great majority of instances, the sanitary state of a town or city is very largely at the mercy of things beyond its own boundaries. Those two great factors in public health, the sources of water supply and the means of sewage disposal, are seldom found wholly within the limits of any town and one or both, nine times in ten, must be sought for on territory not its own, but beyond the bounds of its jurisdiction. Nor only that, but the hygienic questions of most importance to the best success of these undertakings, require for their solution a larger experience and a wider range of knowledge than can ordinarily be found in a local health board. Besides these questions are to a considerable degree constantly recurring, not merely with reference to new enterprises, but in the care and proper maintenance of plants already established and in working order. Something above the average standard of attainments by local boards of health is requisite for the best management of most public undertakings of this kind, in which the general interests of all the towns and cities in a State are more or less concerned. When the general interest is so intimately connected, it follows without argument that whatever is best for the general welfare should so far as practicable be adopted. At least it is reasonable, that any one locality or community should be restrained by some authority from doing that which, selfishly designed solely for its own benefit, may be very disastrous to the welfare of other communities, or on the other hand be required not to neglect doing something essential to the welfare of itself and of other communities. It is without question the true policy of a State to provide for the best good of all its citizens, and most of the States in the Union have recognized that policy as regards health, by establishing State Boards of Health.

These State Boards are, indeed, charged with the duties of investigating the causes of disease, and especially of epidemics, the various effects upon health of localities, occupations, etc. They are required to advise regarding water supplies, systems of sewerage, the means of arresting the spread of contagious diseases and kindred subjects. This is very wise and judicious, but in some of the States, more particularly in the East, the best results are wanting, from the fact that after the State has provided the means of knowing what is the best thing to do in any given case, it has not provided any way of preventing communities from doing *the worst thing* instead of the best if they choose to. While the State thus admits the necessity of supplying to its citizens a sound and scientific standard of public hygiene through its State Board, it omits to insure the advantages which should follow, by neglecting to confer upon said State Board any authority by which local health officers may be held responsible for their observance of such standard. It is quite parallel to conducting a campaign against an invading foe, by directing the commander in chief of the army to instruct the colonels and captains upon the best plan of defense, and when and how they should dispose their respective commands, and then leaving it to the individual option of those officers whether they will be guided or not by such instruction.

Another forcible illustration of the need of making local health boards responsible for their official work, may be found in the management of local epidemics of contagious diseases. It is well known that by isolation and disinfection contagious diseases can be restricted. But the unsystematic, haphazard, half way efforts to accomplish these objects by the average town board of health seldom do any good, and the contagion goes whither it will, until the susceptible material in the community is exhausted and then the epidemic ceases spontaneously. While these constant failures to restrict disease by the appointed officials may bring isolation and disinfection into public contempt, still isolation and disinfection remain the best and most effective means we know It is not the means which should be in contempt, but the incompetent officials who know not how to use them Where, in your experience, is the practice of disinfection satisfactorily performed by town boards of health? The absurdity of telling the family of the sick persons to burn some sulphur in the house, after recovery or death (a very common thing to do) is but a silly caricature of real disinfection

Public establishments for disinfection should exist in every community, and should always be in the charge of competent and intelligent men Yet I will boldly venture the assertion that Connecticut is not the only State in the Union which is wholly unprovided with this most necessary and essential means of public safety The only reason why disinfection stations are not established is the cost, but they are not so costly as epidemics

Now, in conclusion, let me briefly outline the principle of sanitary administration which I have attempted to defend the limit of this address will not admit of detail Public sanitation is no longer the simple matter of half a century ago It has become an elaborate system involving in its practice an acquaintance with many branches of science It has outgrown the comprehension of the town supervision, the town committee man or the town selectman But the town by common consent is still the unit in sanitary administration, and the town health officer must still remain an essential factor in the system, only he must possess some qualifications for the office and can no longer be independent The close relationship of towns, the intimate intercourse of their peoples by reason of modern facilities for rapid transit, produces in every town a direct interest in other towns, and other towns in like manner have an interest in it

In a matter so important as the public health, this common interest demands that towns shall not continue to be irresponsible separate entities, doing or not doing at their option concerning affairs in which other towns are also deeply concerned The town health officer shall have the necessary authority It is not designed to abolish local self-government in sanitary matters, but to strengthen it and combine responsibility with it Just as an individual may abate a nuisance on his own premises in his own way, but is liable for penalties if his way is not effectual, so local health officers should be responsible to a higher authority if they fail of their duty in the administration of sanitary laws in their own jurisdiction I think the idea may be expressed in one sentence in local matters concerning sanitation, let there be central supervision with authority, and local administration with responsibility

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GIFT TO THE CAMDEN MEDICAL SOCIETY —At a meeting of the Camden City Medical Society, Colonel J R Johnson presented to the Society a large oil painting of the "First Dissection" Dr J M Ridge made the presentation speech, and the painting was received on behalf of the Society by Dr O B Gross A rising vote of thanks was extended to the artist, after which a collation was served —*Philadelphia Public Ledger*

A CASE OF SYMPATHETIC NEURITIS AFTER EVISCERATION OF THE EYEBALL

Read before the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY F C HOTZ, M D

PROFESSOR OF OPHTHALMOLOGY IN THE CHICAGO POLICLINIC

Evisceration of the eyeball was introduced by Prof Graefe in Germany and Dr Mules in England ten years ago as a substitute for enucleation, for the reason that it was a less dangerous operation and furnished better conditions for the artificial eye The first report[1] on a larger number of eviscerations performed by Graefe seemed to sustain the favorable opinion of the originators, for among 240 eviscerations there was neither a death nor an instance of sympathetic inflammation after the operation

But soon matters began to take a different aspect. Prof Schuleck of Budapest, for instance, lost two patients among thirty-six eviscerations in the first week after the operation[2] and Dr Cross reported two cases of sympathetic ophthalmitis occurring after evisceration[3] But as Dr Cross had inserted a so-called artificial vitreous, it was maintained the sympathetic inflammation in these cases could not be charged to the operation, but was induced by the foreign bodies

As no other instances seem to have been reported, I wish to present to the Section the following case in which the effects of the evisceration have not been modified or prejudiced by the introduction of an artificial vitreous, but in which two weeks after the operation an optic neuritis appeared in the other eye under circumstances which seem to warrant the opinion that we had to deal with a sympathetic affection.

Aug 6, 1891, Frank S , 21 years old, bookkeeper consulted me in regard to his eyes When but two years old, he accidentally wounded his right eye with a pen-knife, the blade piercing the lower sclero corneal border and passing through iris and ciliary ring into the vitreous A very mild form of irido-cyclitis followed this injury , in two weeks the eye had apparently recovered and its external appearance was as perfect as that of its fellow , but the sight was gone The boy grew up and went through the public school and the high school , and not for one single minute during his entire school life did this blind eye give him any trouble, though it had gradually become perceptibly smaller

In the summer of 1888, it became troublesome for the first time, getting red and tender to the touch and making the other eye rather sensitive to the light, so much so that on some days it was almost impossible for him to do his bookkeeping although his sight always remained clear and strong With the advent of cooler weather all these symptoms disappeared and during the next winter and spring he experienced no trouble, and could work over his books in daytime and read at night with perfect ease But in the summer of 1889 the eye again became red and troublesome, and again the irritation subsided as soon as the weather grew cooler The same thing happened in summer of 1890 , and when the patient came to see me in August 1891, the same trouble had been annoying him for two weeks past

I found the right eye very small, red and quite sensitive to slight pressure , the left eye showed normal vision, refraction, and fundus , but it was a little sensitive to light and became quite red and watery after reading a few minutes. I told the patient in my opinion the proper thing to do in his case was to remove the offending atrophied eye My advice was readily accepted , the patient went to the hospital where I eviscerated[4] the eye August 10 Chloroform was administered, the face had been thoroughly scrubbed with soap and water, the eyelids, eyeball and conjunctiva were washed with sublimate solution 1 to 5000, all the instruments were first immersed in 95 per cent carbolic acid, then treated with boiling water and kept in sterilized water till the end of the operation The eyeball was opened by a circular incision just behind the sclero corneal border, the retina was found completely detached and "chorded," and the choroid was easily separated from the inner surface of the sclera by a flattened scoop The posterior portion of the choroid was calcareous When every trace of the contents was removed, the inner surface of the sclera was washed with carbolic acid and dusted over with iodoform, and the conjunctiva drawn over the scleral wound and brought together by a purse-string suture The eye was once more washed out with the sublimate solution and dressed with borated cotton and sterilized bandage

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[1] Dr Bunge Ueber Exenteration des Anges 1887

[2] Otto Becker enucleation and exenteration, 1888

[3] British Medical Journal July 1887

[4] I decided on evisceration for cosmetic reasons This operation is said to yield a larger stump than enucleation and inasmuch as the growth of the right orbit had been retarded and would allow the insertion of a small artificial eye only I thought the larger stump might give the small glass eye a fuller appearance by preventing its sinking back into the orbit and therefore be of some real cosmetic value to my patient

August 11 —Violent headache, great lid swelling and much chemosis of conjunctiva, bloody serum has been and still is oozing from the stump

August 13 —Patient still in bed, the pain in the head is decreasing no more oozing from stump since yesterday

August 20 —No more headache since two days, only a dull pain over right eye, swelling of upper lid gone, but still considerable chemosis of conjunctiva, stump large and firm Patient is allowed to go home but is advised to abstain yet from reading The left eye has been free from the photophobia since the operation and appears well in every respect

August 29 —Patient calls at the office, the dull pain over the right eye has continued all the time, the conjunctiva is still swollen and pressure on the stump causes deep seated pain in the orbit Since two days the patient has noticed the left eye was getting sensitive to light again, and on pressing on the eyeball he felt a dull pain back of the eye, and since this morning he observed a peculiar unsteadiness of vision, he sees everything very distinctly at first but only for a moment, for instance, when looking at the test types he can read No xx, but the letters gradually seem to fade away and then come back No redness, pupil active, vision clear, but papilla seems redder than at previous examinations

September 1 —Unsteadiness of sight more annoying, V = 20 20, papilla decidedly hyperemic Pain and tenderness of stump still present Hot water compresses ordered on stump, and calomel internally, gr ¼, three times daily

September 4 —V 20 30 only, papilla very red, and its nasal border veiled by a gray mist which extends a short distance over the adjacent retina

September 9 —V = 20-40, papilla still more *indistinct* Pain and tenderness of the stump of right eye has been much less these two days

From this day on the eye began to improve and by October 1, it had regained normal and steady vision (20-20), the papilla showed normal color and well defined border

December 1 —Patient called to see about wearing an artificial eye, the stump of the right eye was so shrunken by that time that it showed no essential difference from the stump after enucleation He had been at his work the past four weeks and experienced no trouble with his eye And on inquiry I learned that during last summer and autumn he had no return of his eye trouble

Remarks —The history of this case, I think, leaves no room for doubting the sympathetic nature of the disturbance of the left eye, and I also think the clinical evidence is sufficiently clear to point out the important and significant difference in the character of the sympathetic disturbance before and after the evisceration We have seen that for several years the left eye had been troubled by periodical attacks of photophobia accommodative asthenopia and irritability unquestionably induced by the tender state of the atrophic right eye But for all these several attacks and though the last attack immediately preceding the operation had lasted two whole weeks we have found the vision still unimpaired and the fundus in a normal condition, and therefore come to the conclusion that these attacks preceding the evisceration were due to *sympathetic irritation* which was promptly relieved by removing the exciting cause in the right eye (its degenerated contents) The right eye remained perfectly quiet after the evisceration for the next seventeen days when it again became sensitive to light and reading, but this time the vision soon became impaired and the ophthalmoscope disclosed the signs of a rapidly progressive optic neuritis This neuritis had certainly no connection with the sympathetic irritation which preceded the evisceration, for we know sympathetic irritation never leads to sympathetic inflammation But when we consider what occurred in and about the right eye during these seventeen days after the evisceration, I think, we may find the cause of the neuritis of the left eye The operation was followed by great swelling of the lids and conjunctiva and by severe pain extending from the right eye over the whole right side of the head, after ten days this violent headache subsided into a dull continuous pain over the right eye which with the chemosis of the conjunctiva lasted nearly two weeks longer

In these symptoms we have the evidence of an acute inflammation which proceeded from the eviscerated eye This inflammation probably followed the tract of the optic nerve to the chiasma, there invaded the optic nerve of the left eye and following its tract down to the eyeball finally produced the ophthalmoscopic evidence of neuritis in the papilla of the left eye In this way I think the optic neuritis in our case was developed and, therefore, may justly be looked upon as the after effect of the evisceration This opinion is materially strengthened by the fact that the neuritis in the left eye did not begin to subside until all signs of inflammation in the right eye had disappeared And when we consider the fact that a violent and prolonged irritation after evisceration such as we have observed in this case, is not an unusual occurrence, when we know it occurs after smooth and easy operations as well as when the evisceration has been difficult and tedious, it must be admitted that even the most carefully executed evisceration creates conditions which may possibly lead to sympathetic inflammation, and that in this respect evisceration appears a less safe operation than enucleation

In the after effects evisceration compares very unfavorably with enucleation After the latter operation the patient seldom suffers much, and may be discharged from the hospital in three to four days After evisceration great pain is the rule, as we have seen, and the recovery is very slow, Dr Bunge found in 240 cases nine days, Dr Hecht in Schweigger's Klinik found in thirty-seven cases ten and two-fifth days the average time which the patient had to remain in the hospital

It is claimed in favor of evisceration[*] that it leaves a larger, more movable stump and thus furnishes better conditions for the movements of the artificial eye This alleged cosmetic advantage seems to be generally conceded, and yet on closer examination it turns out to be all a myth In order to obtain some accurate information in regard to the apparent movements of the artificial eye I measured its outward and inward rotations by the perimeter in the same way as we determine the degree of convergence or divergence in strabismus I told the patient to look as far as he could to the right and found out at which angle of the perimeter the candle light was reflected in the center of the cornea of the glass eye, and then I made him turn his eyes as far to the left as he could and again measured by the light reflex on its cornea the position of the glass eye As the artificial eye follows as well as it can the rotations of the natural eye, I believe these measurements thus obtained represent the extreme limits of motion the artificial eye was capable of in every case The results of my tests are given in the following instructive table

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[*] Dr Bunge, Exenteration, p 64

PERIMETRIC MEASUREMENTS OF THE LATERAL MOVEMENTS OF ARTIFICIAL EYES

PATIENT S	AGE	STUMP	WHEN OPERATION WAS PERFORMED	DEGREES OF ROTATION	
				INWARD	OUTWARD
L S	45	Enucleation	10 years ago	15	25
F S,	21	Evisceration	3 months ago	20	20
A C	21	Enucleation	1 year ago	15	15
Mrs M,	36	Evisceration	4 months ago	15	25
Mrs E	50	Enucleation	5½ months ago	20	25
G L,	24	Enucleation	1 month ago	20	20
M J,	42	Atrophic Eye	20 years ago	10	15
L H	22	Enucleation	6 weeks ago	15	20
Mrs L	20	Atrophic Eye	10 years ago	15	30

These measurements show there is absolutely no difference in the extent of the lateral movements of the glass eye, worn on an evisceration stump, and that worn on an enucleation stump, in either case the inward movements (adduction) varied between 15 and 20 degrees and the outward movements (abduction) between 15 and 25 degrees These results were not surprising to me, for though I have heard so much about the larger, better stumps gained by evisceration I have found these stumps shrink away so much that three months after the operations there is no more of them left than what we find after a suppuration of the globe, and that it is difficult to tell by the stump whether enucleation or evisceration has been performed This observation I have made not only in my own cases but also in eyes which had been eviscerated by other surgeons

But even granting a larger permanent stump to the evisceration, I still maintain the artificial eye does not gain any material advantage by it The largest and best movable stumps, superior to any furnished by evisceration, undoubtedly are those slightly atrophic eyeballs with well preserved vitreous, but complete loss of the cornea and iris (as the result of sloughing or surgical operation) Glass eyes can be worn over such atrophic globes, but they do not show any superior mobility In my table there are two such cases, and we see that the one shows an unusually limited movement, and the other (the last in the list) shows no better adduction (15 degrees) than we get by enucleation or evisceration cases and exceeds their best abduction by 5 degrees only These atrophic eyeballs had an excellent range of lateral rotation, and if the artificial eye could be cemented onto the atropic globe it would, of course, follow the rotations of the latter, and the cosmetic effect would be perfect, because the artificial cornea would describe lateral rotations as perfectly as the natural cornea But as the artificial eye is not fastened to the stump, the latter does not impart its motions to the super-imposed glass shell and the axis of rotation of the glass eye lies much in front of the stump When, therefore, the glass eye seems to turn to the right or left, its cornea shows very little real lateral movement, its principal motion being a rotation on its vertical axis so that its center faces to the right or left On this account the movements of an artificial eye will always be confined to narrow limits whether the glass shell be inserted after enucleation or evisceration*

If I sum up all the clinical facts, I should say evisceration has nothing to show in its favor, while it compares decidedly unfavorably with enucleation in the frequent violent reaction and slow recovery, and therefore does not deserve to take the place of enucleation

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PANOPHTHALMITIS—FATAL MENINGITIS FOLLOWING ENUCLEATION OF THE EYE

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY S D RISLEY, M D

ATTENDING SURGEON AT THE WILLS EYE HOSPITAL LECTURER ON OPHTHALMOLOGY IN THE UNIVERSITY OF PENNSYLVANIA PROFESSOR OF OPHTHALMOLOGY IN THE PHILADELPHIA POLICLINIC AND COLLEGE FOR GRADUATES IN MEDICINE, PHILADELPHIA

John M , age 47, but appearing at least 67, presented himself at the Wills Eye Hospital Dec 12, 1892, bearing a letter from his physician Dr D T Lainé of Media, Penn , under whose care he has been for a severe attack of iritis in the left eye The disease proving rebellious, he was advised to seek hospital treatment He was in feeble health, suffering from severe pain in the eyeball and with violent left hemicrania, vision was reduced to quantitative perception of light There was deep ciliary injection, small pupil, slight haze of the cornea and the remnant of a blood clot was still lying in the lower angle of the anterior chamber There were numerous posterior synechia and dilated blood vessels could be seen coursing over the surface of the iris Tension was normal but the anterior chamber shallow He was placed in bed, blood extracted from the left temple and calomel and soda purge given, eserin being instilled locally He experienced very prompt relief and one week later vision was somewhat improved, the blood clot absorbed, and the ciliary injection less marked but no view of the fundus could be obtained There was simply a gray-red reflex from the pupil When seen two days later, there was a fresh red blood clot lying in the pupil and on the upper and inner pupillary rim of the iris and a large blood vessel could be seen entering it from which the blood was apparently issuing As yet there was no pain but the hemorrhage was soon followed by decided increase of tension and the ball became tender to pressure and with it his headache returned He lost appetite, became sleepless and the general health rapidly declined Under a careful regimen, however, the health improved, the blood clot once more absorbed and the eye became quiet but showed a tendency to frequent recurrences of increased tension and ciliary redness During one of the intervals of freedom from acute symptoms a broad iridectomy was made upward The iris was found friable, the operation was smooth and successful, but bleeding was profuse and the eye was bandaged with the anterior chamber filled with blood There was no undue reaction and the blood clot slowly absorbed, but the wound refused to heal In ten days there was a pouting black mass lying in the wound, but slightly elevated above the corneal limbus, and occupying the entire line of incision The operation was done under antiseptic precaution and the eye was subsequently kept bandaged, being thoroughly washed with bichlorid solution at each dressing and dusted with iodoform There were no visible signs of suppuration but his health steadily failed, his hands were hot and there was a hectic flush on his cheeks, but only slight if any rise in his temperature The eyeball was soft, there was no dread of light and no pain or headache He was greatly depressed in spirts felt that he was going to die and begged to be allowed to return to his home The eye was then enucleated on Jan 25 1893, and found filled with pus The nerve was severed well back, the orbit thoroughly drenched with bichlorid of mercury solution, well dusted with iodoform and bandaged for twelve hours He made a rapid and favorable recovery without suppuration of the stump The infiltration of the tissues of the orbit absorbed rather more slowly than usual but his health rapidly improved so that on the fourteenth day February 7, he was discharged from the hospital apparently well, certainly with no symptoms to awaken apprehension regarding his future One week later February 15, twenty one days after the excision of the eyeball, he sent for his physician, Dr Lainé, but in his absence was seen by Dr J H Fronfield, to whom I am indebted for the following history He complained only of weakness and disgust for food, the temperature was normal and throughout the subsequent history, remained either normal or sub-normal, although taken twice daily at no time was there any rise There was at this time some suppuration of the stump, he was anemic, the tongue pale, large, flabby and indented He was not considered seriously ill Calomel and soda were prescribed to move the bowels and he received an elixir of iron, quinin and strychnia as a tonic

February 18, 10 A M Bowels have been freely moved but can not take the tonic Urine free from albumen 7 P M Decidedly weaker, very melancholy, is sure he will die No pain in the eye, pupil reacts promptly

February 19 In bed, very drowsy, is aroused with much difficulty, rapid pulse, reflexes are normal The right eye shows no muscular deviation, there is no ptosis or dread of light There is no increased suppuration of the stump and no swelling of the orbital tissues, respiration very irregular, at times normal and then extremely rapid subsiding once more to normal No tenderness of the spine, hearing good, no pain and no vomiting *Obstinate constipation*

February 20 Only partially aroused and that with great difficulty and lapses immediately into unconsciousness The head is drawn backward From this time he remained in a state of profound coma with irregular breathing and the backward traction of the head developed into marked tonic opisthotonos, the man resting upon his heels and head until the 26th when he died

No autopsy could be secured At my request Drs G C Ellet and W R Parker, resident surgeons at the Wills Eye Hospital, made for me a careful examination of the excised ball, and I append their report "In the region of the corneal wound the epithelium has proliferated considerably and the superficial layers of the cornea are thickly infiltrated with round cells There is no union of the lips of the wound, the space between them being occupied by iris tissue covered with organizing inflammatory products The iris is pushed forward, adherent to the cornea by heavy organizing bands in the neighborhood of the wound, the anterior chamber being reduced to a slit The portion of the iris which is not prolapsed is covered with a layer of lymph and pus, and where the pupillary space is visible it is filled with a heavy membrane continuous with that in the iris This is continued backward on the under surface of the iris, filling the posterior chamber, and passing with a mass of pus which fills the vitreous chamber The ciliary body seems but little affected, but the retina and choroid are thickly infiltrated with pus as far anteriorly as they can be identified The inner layers of the sclerotic are also attacked Further back, the retina is lost from the specimen Toward the posterior part of the eye the choroid is represented by a thick layer of pus thrown into folds, and stellate pigment cells scattered through it serving to identify it as choroid, none of the vascular structures being visible The optic nerve is in a state of inflammation, the round celled infiltration being pronounced as far back as the specimen shows A few lymph corpuscles are present in the nerve There are no changes in its vessels "

Dr Fronfield's careful report leaves no room for question but that this man's fatal illness was due to cerebro-spinal meningitis The consideration of great interest to the ophthalmic surgeon is its possible relation to his suppurative panophthalmitis and the enucleation of the eyeball The exact character of the intracranial lesion must, in the absence of an autopsy, remain in doubt

Two possible explanations are at hand first, that the meningitis was a mere coincidence, having no relation to the ocular conditions, the other, that the fatal meningitis was infectious and that it was set up by germs conveyed through the cut tissues and open vessels in the orbit to the membranes and venous sinuses of the brain It would be a comforting view of the case could we feel assured that the first proposition was a correct solution of the unfortunate sequel

The very close relation that exists between the eyeball and the intracranial mass would lead us to anticipate serious danger to life from its excision Such expectation would moreover be greatly strengthened by the frequency with which we observe ocular disease as secondary to disease of the brain and its membranes But however frequently we may witness ocular disturbances as secondary to intracranial inflammations, experience shows that the reverse is extremely rare, except in the case of malignant disease Furthermore it has been shown by ample experience that excision of the eyeball is fraught with but little danger to the patient That it is not entirely devoid of danger to life, however, is evidenced in the fact that there have been forty-six reported cases of meningitis, forty-two of which proved fatal Four of these, all fatal, should possibly be excluded as having been subject to malignant disease

These cases have been again and again tabulated and reviewed, so that it is not necessary for me to go over this well-known field again, except to add to the number already known Individual cases were collected by Nettleship to the number of thirty-four in 1886, (Transactions Ophthalmological Society United Kingdom 1886) including a case occurring in his own hands at the Moorfields Hospital, and which he made the basis of an admirable review of the subject In the discussion which followed, McHardy reported two cases of fatal meningitis following the removal of the eyeball, and a third where the meningitis and death followed suppurative panophthalmitis, the ball having been freely opened but not removed Dr Joseph A Andrews, in the *New York Medical Journal*, Dec 29, 1888, has again tabulated the cases, omitting the four non-fatal cases of Nettleship and adding others finding thirty six fatal cases My own case here reported, Mr McHardy's two cases and three others occurring in the practice of my colleagues in Philadelphia but not heretofore reported make a total of forty-six cases of meningitis following enucleation

H D Noyes, M D, has again briefly reviewed the subject in the Transactions American Ophthalmological Society for 1888–89, with the intention of studying the dangers attending excision in suppurative panophthalmitis He there collects 3,742 enucleations at the various clinics with but one death, and suggests that the deaths which have occurred are probably about one for 4,000 enucleations There have, however, been 1,131 enucleations at the Wills Hospital in Philadelphia in twenty years, eighty-five of which are recorded as for suppurative panophthalmitis, and one death here reported Three of my colleagues report each one case of fatal meningitis as having occurred in their practice there during the years mentioned, but no details of them could be found on the hospital records by the House Surgeon, Dr Parker who kindly went over the books for me. This would make a total of 4,873 enucleations and five deaths if these three cases and my own are included On the other hand, there has been no case of meningitis at the large clinical service at the

University Hospital since it was established In any case it is plain from these figures that the operation for excision of the eyeball is more free from danger than one would expect, having in view its critical anatomical relations

The fear which is entertained regarding the danger from the excision of suppurating balls, moreover, does not seem to find support by reviewing the testimony furnished by the reported cases, since only half of the cases, where the point is mentioned were suppurating eyes This statement, it is true, loses some of its force by the fact that the teaching of von Graefe as to the danger to be apprehended from excising suppurating eyes has doubtless had a restraining influence over the practice of surgeons in such cases The fact that the excised eye had been opened, either by accident, operation or inflammation, as pointed out by Nettleship, seems to be of more significance than the presence of visible pus, for in a large majority of all the cases where the history is sufficiently complete to determine the point, the eyes had at some time been opened

In the study of my own case here reported, in the light of the published experiences one finds much confusing testimony In the first place the length of time which intervened between the excision and the onset of the meningitis favors the view which would regard the meningitis as a coincidence The longest time heretofore reported is eight days while in mine it was twenty-one days The rapid recovery, without orbital inflammation, together with his great improvement in general health immediately after the operation all seem to point strongly against any causal relationship between the enucleation and the meningitis

A very important inquiry at this point is as to the possible secondary nature of the eye disease In reviewing the man's history it now seems possible, if not probable, that his severe headache and impaired health may have been due to a low grade of meningitis, and that I was at fault in regarding the head symptoms as entirely due to his severe eye disease Although I did not suspect any cerebral complication, nevertheless the treatment directed for his relief viz —local blood letting, the calomel and soda purge, potas iod et bromid, and later mercurial inunctions were well devised to relieve a meningitis had they been directed with that purpose in view Certainly they afforded him prompt relief from his very severe pain both in head and eye

The absence of orbital symptoms at the onset of the meningitic symptoms affords but little comfort, since in only four of the cases as far as I can find was there any inflammation or irritation of the orbital tissues present, while in many more it is distinctly stated that no connection could be traced The inflammation of the optic nerve and its sheaths is noted in four cases, three of which are the same as noted with orbital inflammation The report of Drs Ellet and Parker shows that in my case also the optic nerve was in a state of active inflammation as far back as the specimen extended Whether this process had invaded the eye from within the cranium or had invaded the brain from the eye must forever remain in doubt I am free to say that I incline to the first, for the reason besides those already stated that the symptoms which ushered in the fatal illness were the same as those I had observed in the hospital before the excision

It must be remembered, however, on the other hand that all the conditions were here present which have in these cases seemed to favor the production of this disease There was the inflamed and suppurating ball, and more than all a ball which had been recently opened, a condition, as has already been pointed out, which was present in nearly all of the reported cases where it was mentioned at all

INTRA-OCULAR INJECTIONS OF SOLUTIONS OF VARIOUS ANTISEPTIC SUBSTANCES, AN EXPERIMENTAL INQUIRY

Read before the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY G E DE SCHWEINITZ, M D
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A number of researches have been published concerning the effect of the introduction of various substances, solid and liquid, into the vitreous chamber. These may be summarized as follows

1 The introduction into the vitreous of foreign bodies (pieces of wire, lead, glass, etc), or of irritating liquids (croton oil, tincture of iodin, etc) , 2, the injection of sterilized blood into the vitreous humor, 3, intra-ocular injections of various antiseptic liquids [1]

Researches belonging to the first class, from the time of the publication of Pagenstecher's essay on the pathology of the vitreous[2] to Leber's superb work,[3] are chiefly concerned with the behavior of the vitreous towards these foreign substances, and with the complex problems which surround the pathology of inflammation Researches of the second class, which date from the imperfect experiments of Legros,[4] to the thorough investigation of the subject of blood injections into the vitreous by Probsting,[5] have been undertaken to study the deportment of the retina under these circumstances, and to add to our knowledge of the mechanism of retinal detachment and the production of proliferating retinitis. Researches of the third class have been conducted chiefly to test the therapeutic value of the injection of antiseptic fluids directly into the vitreous of an inflamed eye, for example, one suffering from hyalitis, or from sympathetic ophthalmitis, or to try their efficacy in preventing an inflammation of this character after the eye has been exposed to the influences likely to produce it

Abadie,[6] in 1890, suggested the propriety of injecting 2 drops of a solution of sublimate, 1 to 1000, into a wounded eye which has caused sympathetic ophthalmitis of the other eye, which should also be treated with a similar injection directly into the vitreous humor According to him, these injections were of use in checking and ameliorating the inflammatory process Subsequently he published[7] three cases of sympathetic ophthalmitis cured by intra-ocular injections of corrosive sublimate, the strength of the injections being in two instances 1 to 1000 and in one 1 to 500

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[1] Experiments to determine the effects of injections into the anterior chamber for example those performed by Nuel (Revue Générale d Ophthalmologie T viii, 1889 p 343) do not belong to the present classification As Dr Berry pointed out injections into the anterior chamber and into the vitreous can scarcely be compared

[2] Archives of Ophthalmology Vol I p 500

[3] Die Enstehung der Entzundung und die Wirkung der Entzündungerregenden Schädlichkeiten Leipzig, 1891 p 177 et seq

[4] Journal de la Anatomie et de la Physiologie 1873

[5] Archiv f Ophthalmologie Bd xxxviii Abt III, 1892 p 114

[6] Pathogénie et nouveau Traitement de l'Ophthalmie Sympathetique Annales d Oculistique, Vol ciii 1890 p 183

[7] Nouveaux cas d'Ophthalmie Sympathique, Guéri par les Injections intra oculaires de Sublimé Annales d'Oculistique Vol civ, 1890, p 229

In the discussion of a paper communicated by Darier, Abadie's Chief of Clinic, to the French Society of Ophthalmology, on the 8th of May, 1891,[8] concerning sub conjunctival injections of sublimate in ocular therapeutics, the question of intra ocular injections of the same drug received attention, Wecker regarding the transition from intra-ocular to sub conjunctival injections as a decided advance, and doubting the efficacy of the former method of administration In the close of the discussion, Abadie expressed himself as willing to abandon the intra ocular injections of sublimate for sub conjunctival injections, provided it is demonstrated that they are more efficacious, inasmuch as certain observers have doubted their efficacy and, moreover, have not merely been disappointed in their results, but have seen positive harm follow

Occasionally reports of successes from the use of Abadie's treatment of migratory ophthalmitis have appeared in the journals, for example, Baquis[9] reports a remarkable case of this character a woman aged 26 years sustained an injury of the left eye, resulting in an adherent leucoma At the end of three months chronic irido cyclitis produced sympathetic ophthalmitis in the left eye The author then injected 3 drops of a sublimate lotion, 1 to 500, into the sympathizing eye Marked improvement occurred At the end of eight days the injection was repeated, but there were also twelve mercurial frictions, which caused the absorption of the exudates in the pupillary field, showing that there was an intense neuro retinitis in the sympathizing eye At the end of six months the cure continued This author states that he was encouraged to use Abadie's method, not only by the results obtained by the reporter, but on account of the researches of Dr Ovio of Padua, on the intra-ocular circulation and the nutrition of the vitreous This experimenter definitely asserts that weak sublimate lotions may be injected into the vitreous without causing chronic lesions, and without causing the vitreous to diminish in any way the microbicidic power of the sublimate lotions, no matter how weak they may be

Darier[10] states that he has experimented in 1889, on rabbits with the intra ocular injections of "various substances," and that in studying daily the modifications produced by the substances on the vitreous body and the deep membranes of the eye, he was struck by observing how promptly the solutions thus introduced were absorbed without causing excessive disturbance, provided they were very dilute The character of the substances is not described in the paper to which reference has been made

At a meeting of the Ophthalmological Society of the United Kingdom, Nov 10, 1892, Berry[11] gave an account of some facts elicited by experiments on rabbits, undertaken by his assistant, Dr Chassaud, with the object of ascertaining the effect of different solutions injected into the vitreous Unfortunately the details of these experiments are not at hand, but in the abstract given the following results are recorded in some cases, before injecting the antiseptic, the vitreous was inoculated with fresh septic pus The only substance injected after inoculation which seemed capable of preventing purulent hyalitis was chlorin water, and this injection was better tolerated by the retina and vitreous than other strong antiseptic fluids In two cases of purulent hyalitis in man, chlorin water injected into the vitreous led to immediate improvement and the eyes were saved, although sight had been lost before treatment was adopted In the discussion which followed, Griffith suggested the propriety of the use of trichlorid of iodin as an intra ocular injection—an antiseptic, as is well known, which has been much lauded by Pfluger and others in France Berry expressed the belief that the use of intra-ocular injections was a distinct advance in ocular therapeusis, and Mr Hartridge, referring to cases which frequently occurred where the injection of a germicidal solution was evidently indicated, thought that if this method could be demonstrated to be a safe one, a very desirable addition to occular therapeutics would be made

Therefore, both from the clinical and the experimental standpoint, it is desirable to add new data Those which I present are entirely experimental and comprise

1 The injection into the vitreous chamber of rabbits of various antiseptic substances, namely, bichlorid of mercury, 1 to 500, 1 to 1,000 and 1 to 5,000 respectively, cyanuret of mercury 1 to 1,000, aqua chlorinata, officinal strength, blue pyoktanin 1 to 1,000 and trichlorid of iodin 1 to 1,000

2 The injection into the vitreous chamber (dogs and rabbits) of an emulsion of staphylococcus pyogenes aureus of the sixth generation, and after the development of purulent hyalitis the injection of antiseptic fluids (bichlorid of mercury and aqua chlorinata)

3 The simultaneous injection of the staphylococcus emulsion and the antiseptic fluids

FIRST SERIES

Experiment 1—2, 8, 1893 Full grown, slate-colored rabbit. Five minims of bichlorid of mercury solution, 1 to 500, injected into the vitreous 2, 9, 1893 Vitreous cloudy, and at the upper portion somewhat in the position of the injection, a large, dark cloud and a smaller detached one lower down 2, 20, 1893 No change in the permanent lesion of the vitreous

Experiment 2—2, 17, 1893 Full grown, black rabbit Five minims of bichlorid of mercury, 1 to 1,000, injected into the right vitreous, 2 20, 1893 Vitreous cloudy 2, 24, 1893 Vitreous entirely opaque, practically no reflex from the fundus, 3, 1, 1893 Rabbit killed and eye placed in Muller's fluid

Microscope—Choroid edematous, retina practically indistinguishable, being merged into a tissue composed of round and oval cells, well developed fibers and blood channels, through the outer layers of which are freely scattered oval and round densely pigmented cells Additional areas of blood corpuscles and patches of granular débris are visible

Experiment 3—2, 17, 1893 Full grown, white-nosed Maltese rabbit Five minims of bichlorid of mercury, 1 to 1,000, injected into the right vitreous 2, 20, 1893 Large, greenish-white cloud occupying vitreous 2, 24, 1893 Similar appearances, giving somewhat those presented by connective tissue formation in vitreous 3, 6, 1893 Eye removed and placed in Muller's fluid Ophthalmoscopically the vitreous was occupied by a huge whitish mass covered with reddish spots, probably hemorrhages, and giving the impression of extensive detachment of the retina

Microscope—Fine granular débris in anterior chamber, remains of vitreous granular, but no connective tissue.

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[8] Des Injections sous—conjunctivales de Sublimé en Thérapeutique oculaire Arch d'Ophthal Vol xi 1891 p 449

[9] Annali di Ottalmologia, Vol xxi, fasc 4 et 5, Abstr Arch d Oph December, 1892 p 781

[10] Des Injections sous—conjunctivales de Sublimé Annales d'Oculistique T civ Avril 1893 p 242

[11] Intra ocular Injections of Antiseptic Solutions Ophthalmic Review, December, 1892

formation Choroid imperfect and detached (section, however, broken somewhat, hence possible fault in technique), retina extensively detached, in places normal in structure, but in others proliferation of Mueller's fibers (connective tissue framework) passing into vitreous and forming a delicate network of fine fibers (Compare results obtained by Probsting loc cit page 139) The lesions are analogous to proliferating retinitis

Experiment 4—2, 17, 1893 Full grown, gray rabbit Five minims of bichlorid of mercury, 1 to 5,000, injected into the right vitreous 2, 20, 1893 Large, dark cloud occupying vitreous No change before rabbit's death, four days later

Experiment 5—5, 5, 1893 Full grown, buff colored rabbit Two minims of bichlorid of mercury, 1 to 500, injected into left vitreous Immediately afterwards two air bubbles and a small circular cloud visible with ophthalmoscope 5, 9, 1893 Dark opacity in the vitreous up and out, stationary, and resembling a fly's wing The rest of the vitreous clear 5, 11, 1893 Opacity in the vitreous unchanged 5, 17, 1893 Previously described opacity remains stationary Slight general haze in the vitreous 5, 29, 1893 Rabbit dead No change in the opacity

Experiment 6—Large, buff colored rabbit (pregnant) Two drops of bichlorid of mercury, 1 to 500, injected into the left vitreous Immediately afterwards a dark streak marking the track of the needle, a small dark cloud just in the center of the vitreous 5, 9, 1893 Circular opacity in the vitreous with small, central spot The rest of the vitreous clear 5, 11, 1893 The large circular opacity, with a smaller dark center described in previous note unchanged The remainder of the vitreous clear 5, 17, 1893 Opacity in the vitreous of dense white color, shaped like two superimposed rings, rest of vitreous clear 6 1, 1893 No change in previously described opacities Rabbit killed and eye placed in Muller's fluid, not yet examined

Experiment 7—2, 17, 1893 Full grown, black rabbit Ten minims of aqua chlorinata injected into left vitreous On withdrawing syringe a large bleb appeared beneath the conjunctiva, and the vitreous seemed to be filled with a cloudy substance and several air bubbles 3, 6, 1893 Extensive clouding of the vitreous, with probable detachment of the retina 3, 20, 1893 Eye placed in Muller's fluid, no change, other than deepening of opacity, having occurred

Microscope—Choroid for the most part in place, but edematous, prolapse at point of entrance of needle Retina extensively detached and scarcely recognizable, being associated with a band of tissue fiber and round and oval cells and inflammatory material extending from nerve entrance to anterior portion of eye

Experiment 8—2, 17, 1893 Full grown, white nosed Maltese rabbit Ten minims aqua chlorinata injected into left vitreous 3, 6, 1893 Vitreous has remained clear, that is, there have been no dark opacities or white infiltrations and the eyeground is visible without apparent change in the retina 3, 20, 93 Eye placed in Müller's fluid, but not yet examined

Experiment 9—2, 17, 1893 Full grown, gray rabbit Ten minims of aqua chlorinata injected into left vitreous 3, 6, 93 Extensive white clouding of the vitreous, and probable detachment of the retina 3, 20 1893 Eye placed in Müller's fluid, but not yet examined

Experiment 10—3, 8, 1893 Full grown, white and gray rabbit Ten minims of aqua chlorinata injected into right vitreous 3, 11, 1893 Cornea hazy and no view of fundus (Probable contamination from imperfect sterilization of needle

Experiment 11—3, 8, 1893 Full grown white and gray rabbit Five minims of aqua chlorinata injected into right vitreous 3, 11, 1893 Large, greenish white opacity well forward in the vitreous, giving the appearance of an old detachment of the retina, and connective tissue formation in vitreous No change before rabbit's death, three days later

Experiment 12—3, 8, 1893 Full grown white and gray rabbit Ten minims of aqua chlorinata injected into right vitreous 3, 11, 1893 Large greenish-white opacity obscuring the entire vitreous Eye removed and placed in Muller's fluid

Microscope—Retina and choroid for the most part in place and of fairly normal appearance, but well forward on right side a circumscribed detachment of retina, the space between retina and choroid being filled with a granular material (coagulated vitreous) containing a number of hypertrophied vitreous cells

Experiment 13—4, 17, 1893 Full grown black rabbit Ten minims of aqua chlorinata injected into right vitreous Immediately afterwards a large air bubble surrounded by a dark cloud 4, 20, 1893 Circular white opacities and still some air bubbles present in the vitreous 4, 28, 1893 Several large, white opacities hanging in the vitreous surrounded, however, by clear vitreous, permitting a view of the fundus No hemorrhages in the retina and no detachment 5, 9, 1893 Practically no change from note under 4, 28, 1893 5, 17 1893 Irregular, dense, white opacities scattered throughout the retina, between which the fundus is dimly seen, with evident patches of choroiditis down and out 6, 1, 1893 No change from above Eye removed and placed in Muller's fluid, but not yet examined

Experiment 14—4, 17, 1893 Full grown black rabbit Ten minims of aqua chlorinata injected into right vitreous Immediately afterwards numerous air bubbles surrounded by a cloud 4, 20, 1893 Streaks of dark opacity and clouding the vitreous, partially obscuring the fundus 5, 4, 1993 Entire vitreous opaque and whitish Lens beginning to be cataractous 5, 9, 1893 Diffuse opacity of the entire vitreous, presenting the general appearance of a white cataract 5, 11, 1893 Eye removed and placed in boro-glycerin, but not yet examined

Experiment 15—2, 20, 1893 Full grown white and gray rabbit Five minims of cyanuret of mercury, 1 to 1,000, into right vitreous 2, 24, 1893 Vitreous cloudy and eyeground invisible No change before rabbit's death

Experiment 16—2, 20, 1893 Full grown white and gray rabbit Five minims of cyanuret of mercury, 1 to 1,000, injected into right vitreous 2, 24, 1893 Vitreous cloudy and streaked, but appearances of whitish masses and detachment of the retina lacking No clearing of vitreous before the rabbit's death, three days later

Experiment 17—Five minims of cyanuret of mercury, 1 to 1,000, injected into left vitreous Immediately afterwards dark streaks in vitreous and several air bubbles 3, 11, 1893 Vessels of the retina visible, but the vitreous hazy and streaked Rabbit dead two days later, without change

Experiment 18—3, 8, 1893 Five minims of cyanuret of mercury, 1 to 1,000, injected into left vitreous Immediately afterwards dark streaks in vitreous and several air bubbles 3, 11, 1893 Vitreous shows large, greenish white opacity obscuring the fundus Eye removed and placed in Muller's fluid

Microscope—Choroid edematous, retina much broken and detached, due to imperfect technique, typical prolapse of choroid into wound made by entrance of needle The internal portion of the puncture is closed with granular pigment cells from the choroid, beyond is a tissue composed of round and oval cells (granulation tissue) capped at the scleral orifice with pigment granules

Experiment 19—3, 8, 1893 Full grown gray and white rabbit Exact repetition of Experiment 16

Experiment 20—4, 17, 1893 Full grown black rabbit Five minims of cyanuret of mercury, 1 to 1,000, injected into left vitreous Immediately afterwards a large air bubble surrounded by a dark cloud 4, 20, 1893 Whitish and darkish opacities in the vitreous partially obscuring the retina 4, 28, 1893 Vitreous opaque and whitish 5, 9, 1893 Scattered whitish opacities throughout the vitreous obscuring any view of the fundus 5, 17, 1893 Entire vitreous opaque, of a dense white color

Experiment 21—4, 17, 1893 Full grown black rabbit Five minims of cyanuret of mercury, 1 to 1000, injected into left vitreous 4, 20, 1893 Whitish and grayish opacities in vitreous, largely obscuring the retina 4, 28, 1893 Entire vitreous filled with an irregular whitish mass covered with hemorrhages 5, 9, 1893 Practically no change from note under 4, 28, 1893, except that in the upper and the inner portion of the vitreous there is a break in opacity, permitting a red reflex from the fundus 5, 11, 1893 Eye removed and placed in Muller's fluid

Microscope—Choroid detached, retina not distinguishable, being bound up with extensive tissue formation in vitreous composed of young fibrous tissue, inflammatory cells, pigment cells and blood corpuscles

Experiment 22—5, 11, 1893 Large buff colored rabbit (pregnant) Two minims of trichlorid of iodin injected into right vitreous Immediately afterwards two air bubbles and a small ring of opacity visible with the ophthalmoscope 5, 17, 1893 Large circular opacity of dense white color with a clear center directly in the center of the vitreous, the rest of the vitreous clear 6, 1, 1893 Circular opacity described above, with strands of similar color passing in several directions through vitreous Eye removed and placed in Muller's fluid, but not yet examined

Experiment 23—5, 11, 1893 Full grown buff-colored rabbit

Five minims of blue pyoktanin, 1-1000, injected into right vitreous Immediately afterwards a small purple cloud visible in the center of the vitreous 5, 17, 1893 Irregular dark opacity up and in, and the entire vitreous of a faint, purplish hue No detachment of the retina 6, 1, 1893 No change before rabbit's death, two days ago

SECOND SERIES

Experiment 1—2, 8, 1893 Full grown albino rabbit Five minims of an emulsion of staphylococcus pyogenes aureus of the sixth generation injected into right vitreous 2, 9, 1893 Some purulent conjunctivitis, entire cornea hazy, iris dimly visible below in the upper and inner portion of the cornea and yellowish, purulent mass Five minims of bichlorid of mercury injected directly into the vitreous 2, 10, 1893 Much increase in the purulent keratitis Eyeballs soft Germicidal injection repeated 2, 17, 1893 Rabbit dead from general infection

Experiment 2—2, 24, 1893 Full grown white and gray rabbit Production of extensive hypopyon keratitis and probably purulent hyalitis by emulsion of staphylococcus Five minims of bichlorid of mercury 1-5000 injected without result Rabbit dead from general infection

Experiment 3—2, 8, 1893 Large mongrel poodle, full grown Five minims of emulsion of staphylococcus injected into right vitreous 2, 9, 1893 Slight conjunctivitis, cornea hazy and pus in the central layers No view of fundus Ten minims of bichlorid of mercury 1-500 injected into vitreous 2, 10, 1893 Extensive purulent keratitis, the eye soft, injected, and apparently in a state of panophthalmitis Germicidal injection repeated 3, 8, 1893 No further treatment was given to the mongrel poodle except to wash his eye with warm water The conjunctivitis gradually disappeared and the eyeball lost its inflammation At this date the eye is quiet, slight injection of the episcleral vessels no pus anywhere visible, the cornea hazy in its lower portion, but the iris visible above, being a result entirely unexpected after the injection of the staphylococcus

Experiment 4—2, 20, 1893 Gray and white rabbit Five minims of staphylococcus emulsion injected into right vitreous 2, 21, 1893 Five minims of bichlorid of mercury, 1 500 injected 2, 24, 1893 Purulent ulcer and hypopyon and the rabbit dead of general infection

Experiment 5—2, 20, 1893 Full grown rabbit Exact repetition of Experiment 4, with the same result

THIRD SERIES

Experiment 1—2, 27, 1893 Full grown black rabbit Five minims of staphylococcus emulsion injected into right vitreous, immediately followed by 5 minims of bichlorid of mercury, 1 500 3, 1, 1893 Cornea infiltrated and a large quantity of pus in its lower portion 3, 6, 1893 Entire cornea red, pus filling the anterior chamber 3 10, 1893 Eye intensely hyperemic, extensive hypopyon No ultimate improvement

Experiment 2—2, 27, 1893 Full grown tan and white rabbit Five minims of staphylococcus emulsion injected into right vitreous, immediately followed by 10 minims of cyanuret of mercury, 1-1000 3, 1, 1893 Cornea cloudy and infiltrated No view of the eye ground 3, 6, 1893 Large mass of the appearance of lymph filling the anterior chamber and giving the impression of spongy iritis 3, 10, 1893 Extensive hypopyon keratitis with purulent conjunctivitis No ultimate improvement

Experiment 3—2, 27, 1893 Full grown gray rabbit Two minims of staphylococcus emulsion, immediately followed by an injection of 10 minims of aqua chlorinata, into the right eye 3, 6, 1893 Hypopyon keratitis 3, 10, 1893 Entire cornea cloudy and infiltrated, and pus filling the entire anterior chamber Eyeball removed and placed in Muller's fluid

The thirty-one experiments which comprise this research may be summarized as follows

Normal Eyes—There were six injections with bichlorid of mercury, the dose varying from 2 to 5 minims, in all, permanent lesions visible with the ophthalmoscope were produced in the vitreous, two eyes examined with the microscope showed extensive new formed connective tissue in the vitreous, together with detachment of the choroid and retina on the one hand and, on the other, lesions indicating an early stage of proliferating retinitis

There were eight injections with aqua chlorinata, the dose varying from 5 to 10 minims, in all, permanent vitreous lesions were produced, except in one (Experiment 8), in which the vitreous remained clear, that is, there were no well-formed dark opacities, or white areas of infiltration One eye in this series was contaminated by imperfect sterilization of the syringe Two eyes were examined with the microscope, and showed in one after thirty-one days had elapsed, extensive detachment of the retina and *the formation of a band of tissue composed of young* cells and fibers constituting the so-called inflammatory material, which passed from the optic nerve entrance through the entire vitreous, and in the other a circumscribed detachment of the retina three days after the injection

There were eight injections with cyanuret of mercury, the dose being 5 minims in each, and causing in every instance positive lesions in the vitreous demonstrable with the ophthalmoscope in the form of more or less dense opacities Two eyes examined with the microscope showed in one detachment of the retina, hernia of the choroid into the wound produced by the puncture with the needle, causing traction on this membrane, and in the other twenty-five days after injection, extensive tissue formation in the vitreous of the type previously described

There was one injection of trichlorid of iodin, the dose being 2 minims, resulting in dense opacity of the vitreous There was one injection of blue pyoktanin, resulting in a purplish discoloration of the vitreous, and a cloudlike opacity

Pathological Eyes—In the first series there were five experiments—four rabbits and one dog—purulent hyalitis going on to purulent ophthalmitis, having been produced by staphylococcus emulsion. The inflamed eyes were treated by injections of bichlorid of mercury directly into the vitreous, the dose being 5 and 10 minims, and varying in strength from 1 500 to 1-5000 The rabbits failed to show any signs of amelioration, and died from general infection The dog showed no improvement at first but gradually improved, and one month after the last injection, only two having been given, was discharged with the eye comparatively quiet, a moderately dense macula being all that remained of an inflammation which at its height gave evidence of the most extensive purulent kerato iritis, probably ophthalmitis

In the second series there are three experiments, all rabbits, who received a simultaneous injection of staphylococcus emulsion and 5 minims of bichlorid of mercury 1-500, 10 minims of cyanuret of mercury 1-1000, and 10 minims of aqua chlorinata officinal strength respectively In no case was there the slightest improvement The eyeball of Experiment 3 treated with aqua chlorinata was examined with the microscope and showed purulent infiltration of all of the coats of the eye—in other words, an acute panophthalmitis Hence it is evident that in the normal eyes injected with solutions of various antiseptic substances, only one escaped positive permanent lesion easily visible with the ophthalmoscope, and situated usually in the vitreous, more rarely in the choroid and retina This exception occurred with aqua chlorinata, and is so unexpected a result that suspicion is not lacking that there may have been failure to introduce the drug as thoroughly as in the other eyes, although there is no note as to any imperfection in the experiment It is mentioned, however, because as will be remembered, Dr

Berry has found that chlorin water was better tolerated by the retina and vitreous than other strong antiseptic fluids.

These experiments certainly fail in confirming the observations of Ovio, that weak solutions of sublimate may be injected into the vitreous without causing chronic lesions; that is to say, a solution of 1-5000 will produce as much disturbance as a lotion of 1-500. It seems evident from the experiments that under any circumstance more would depend upon the dose of the drug injected than upon the strength of the solution used. Two minims seem to be much less likely to cause a general clouding of the vitreous than 5 or more minims, but none the less, even in this small dose, in each instance they caused a chronic and dense vitreous opacity. In addition to the lesions which are so evident with the ophthalmoscope, the microscope shows that they were not confined alone to the vitreous, and that others, not ordinarily detectable, were present. Thus, according to circumstances, we deal with edema and rarefaction of the choroid, sometimes with its detachment, with detachment of the retina and a type of retinitis analogous to that which is designated proliferans, and with connective tissue formation in the vitreous of extensive character. Not only this, but it is interesting to note that in two of the punctures examined there was well-marked hernia of the choroid. How much such incarceration of this membrane would add to the danger of the treatment it is difficult to decide. It is suggestive of the fact that other punctures in operative surgery in this region may be followed by a similar result.

The entire failure to check the purulent inflammation called into existence by staphylococci emulsion, by injecting into the vitreous strong solutions of bichlorid of mercury, or to prevent its occurrence by a simultaneous injection of a solution of bichlorid of mercury, cyanuret of mercury, or aqua chlorinata, is instructive, as showing an indifferent therapeutic power on the part of these injections; but it should be remembered in all fairness, that the inflammation was exceedingly active, that the number of experiments is comparatively few, and that the animals used were rabbits, whose well-known susceptibility to all agents that cause suppuration render them peculiarly liable to the activities of the staphylococci, and equally difficult to impress with counteracting remedies. The apparent cure of the mongrel cur is interesting as an isolated fact, but can not be accepted in strong confirmation of the treatment chiefly because it is a single experiment and needs confirmation. In fact, to test the therapeutic value of these injections, dogs should be submitted to a similar series of experiments.

The evident conclusion of the whole matter, from the experimental standpoint of the present research is, that the vitreous, choroid and retina withstand badly intra-ocular injections of various antiseptic solutions; that these injections in rabbits have no influence in preventing or checking a purulent inflammation originated by staphylococci injection; that in a dog intra-ocular injections of bichlorid of mercury were followed by the cure of a purulent ophthalmitis; that if the drugs are to be employed, the dose should be a small one, probably not more than 2 minims, in this respect conforming with Abadie's original recommendation.

DENDRITIC KERATITIS

Read in the Section on Ophthalmology at the Forty Fourth Annual Meeting of the American Medical Association

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In 1871, at the Heidelberg Ophthalmological Congress, Horner[1] described a disease of the cornea characterized by the appearance of numerous vesicles arranged in groups, accompanied by severe pain, photophobia, lachrymation and conjunctival irritation coincident, in many cases with herpes febrilis of the nose, lips, eyelids and other parts of the face. In the thirty-one cases observed by him, there was in every case some catarrhal inflammation of the respiratory passages, and in twenty-eight there was present a herpes of the nose or lips. To this affection Horner gave the name, "herpes febrilis corneæ."

Inquiry as to the cause of this condition has been further prosecuted by subsequent writers, notably by Mlle. Kendall,[2] a pupil of Horner, who in 1880, analyzed 115 cases from the Zurich clinic.

These were differentiated from Zoster and classed as herpes febrilis. As to the general diseases that were held to have some causal relation to the corneal affection, coryza, catarrh, or cough preceded or coexisted with thirty-six, pneumonia with thirteen, passing chill and fever eleven, intermittent fever three, rheumatism two, gastric catarrh two; hay fever, typhoid, toothache, whooping cough, cessation of a chronic discharge of nose, erysipelas each caused one case; two occurred while patients were in childbed; some mild illness accounted for three; while in thirty seven there was no existing malady or assignable cause for the herpes of the cornea.

With these observations accord well the opinion of Godo[3] who attempted to differentiate a symptomatic and an idiopathic form of the malady; in the former of which there was a period of general illness followed by the appearance on the cornea of vesicles which, breaking down, left small ulcers. Godo observed that malarial infection was present in nearly one third of his cases, and ascribed to it the cause of the corneal herpes. Still later, Haab, who succeeded Horner in Zurich, Fuchs, Adler and others have noticed the frequency of herpes of the cornea following influenza. A valuable contribution to this subject is an inaugural thesis by Wangler,[4] which appeared in 1889, and contains a study of all the cases, 150 in number, that had been observed in the Zurich clinic since 1871. This number shows nearly 4 cases to each 1,000 patients (about 0.37 per cent.), which indicates that the affection is not so rare as has been commonly supposed.

In the Ophthalmological Section of the Eighth International Congress of Medicine at Copenhagen in 1884, Hansen-Grut[5] reported a condition of the cornea which he termed "dendritic keratitis." He describes it as "a superficial ulceration with a chronic course and a tendency to become serpiginous." It begins with slight pain and conjunctival injection. The epithelium ulcerates rapidly and during the whole course of the malady, the pain, injection and photophobia are comparatively insignificant "The ulceration continues to propagate itself, '*dans tous les sens*,' by means of buds or excrescences, so that the line of demarcation of the ulceration, which remains very superficial during the whole course, becomes very irregular The surrounding parts remain perfectly clear and the cornea does not become vascular This affection must not be mistaken for vesicular keratitis It is in no way connected with frontal herpes, nor with herpes accompanying bronchial catarrh or pneumonia, the form so well described by Horner" In a later communication, he differentiates dendritic keratitis from herpes cornea and says "In the former there is no question of vesicles, and in no case was there any previous disease that could have occasioned an herpetic eruption"

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[1] Zehender's Klin. Monatsbl. 1871, p. 326.

[2] Josephine Kendall. "Ueber herpes corneæ." Inaug. Diss. Zurich, 1880.

[3] De l. herpès fébrile de la cornée. Receuil d'Ophthal. 1880, p. 183.

[4] Ueber herpes corneæ—Zurich, 1889.

[5] Transactions of Eighth International Congress, Ophth. Section, Aug., 1884.

Somewhat later, Emmert,[6] apparently without a knowledge of the contribution of Hansen-Grut to the subject, recorded and described six cases of a new affection, which seems from the description to be similar in nature to those seen by the latter author In these cases there was a form of ulcerative keratitis beginning as a point of grayish sub-epithelial opacity, from which branches were thrown out, these in turn dividing and throwing off branches to either side The ulceration was progressive but remained superficial and was accompanied by more or less photophobia, lachrymation and redness of the conjunctiva On examination of scrapings from the furrows he found bacilli

While both writers suspected that the malady was of mycotic origin, Emmert believed it to be connected in some way with the scrofulous and tuberculous diathesis, but Hansen Grut denies this influence Emmert observed in a number of his cases that the point of departure was an ulcer, possibly from some abrasion, or from a foreign body on the cornea, which seemed to furnish the door of entrance for the microorganisms Both these writers appear to have been unaware of the fact that Chas J Kipp[7] of Newark, N J, in 1880, four years previous to the announcement by Hansen-Grut of the discovery of a peculiar dendritic form of ulceration of the cornea, had read a masterly article before the American Ophthalmological Society, describing an affection which, in its salient features is remarkably similar to that recorded by the Danish observer, but ascribing the cause to malarial infection "This ulceration," he says, "is commonly first noticed shortly after an attack of intermittent fever, often simultaneously with the appearance of herpetic vesicles on the nose and lips In a number of patients who had annual visitations of this fever, each attack was regularly followed by the ulceration of the cornea" The ulceration began with severe pain in and around the eye, especially along the course of the supra-orbital nerve, with circumcorneal injection, photophobia and lachrymation, symptoms which in Hansen Grut's cases were quite insignificant If examined early enough, one or two slightly raised opaque lines were seen on the cornea, which on the following day had increased in length and had been transformed into a shallow ulcer He does not speak of the epithelium being raised to form vesicles The ulcer spread slowly by sending out at places club-shaped, slightly raised, grayish offshoots from its sides which were nothing more than small areas of new infiltration in connection with the original ulcerated area In this way was formed a branching, dendriform ulceration which had a tendency to extend over the greater part of the cornea if not checked

In most of Kipp's cases, the ulcer remained superficial and showed no tendency to extend deeply as in serpiginous infected ulcer, and a hypopyon was rarely seen in connection with it In this respect, as well as in chronicity and the length of time required for complete healing, this ulcerative process resembles that described by Hansen Grut,[8] while in most particulars, the description accords so well with that of Emmert,[9] that one is constrained to believe the process is the same Within the past eight months, three cases of this interesting affection have come under my observation, which although presenting no new features, resemble in some respects all the so called different varieties of this condition

Case 1—J P, age 30, Polish, came to Chicago Policlinic March 30, 1892, with a superficial ulcer of the left cornea which began a few days before as a soreness of the eye There was considerable temporal pain, lachrymation and photophobia On the cornea was seen an ulcer beginning near the upper margin and extending downward, and on each side of it was a little branch or bud that suggested at once dendritic ulceration No history of any recent illness was obtained, but he had suffered from malaria some years ago He was given quinia sulph grs iv t i d The ulcer extended and seemed to become deeper Small offshoots were thrown out from the main branch, but after crossing the central part of the cornea the process ceased and healing took place rather rapidly so that by April 22 he was well

The opacity that remained marked the course of the ulcer (Fig 1) The treatment consisted of instillations of atropin gr iv ʒi, hot applications to relieve the pain, and quinin

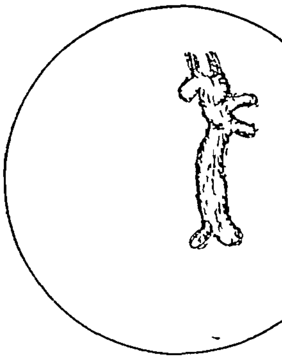

FIGURE 1

Case 2—J G, age 52, was first seen June 15, 1892, at the Chicago Policlinic, when he complained of pain in left eye, with great lachrymation and photophobia Trouble began eleven days before, and had been gradually increasing A superficial ulcer of the cornea could be seen extending from above downward This branch had a small offshoot to the left, and the floor of the ulcer had a grayish appearance There was severe temporal and frontal pain, and pressure upon the supra-orbital nerve and its branches caused excruciating pain Patient had suffered extremely from malaria when in the army, nearly thirty years ago, and since then had had from time to time attacks of neuralgia, malaise, etc, that he attributed to malarial poisoning Cornea was not anesthetic Ocular and palpebral conjunctiva considerably injected Ordered grs x of quinin early in the morning, for the pain seemed to be most severe in the forenoon, atropin and hot applications to the eye Two days later he seemed to be better, and the dose of quinin was diminished

June 25 Ulcer seemed to be spreading downwards, another little bud was seen to the left A few days later as the disease was not checked, the ulcer was cauterized thoroughly with 95 per cent carbolic acid, after dropping into the eye a 2 per cent sol of fluorescein in order to differentiate the ulcerated area, which was then stained green, the healthy cornea remaining uncolored The eye appeared better next day, the upper part of the ulcer had healed, but in a few days the trouble began again, the ulcer gradually creeping around the center of the cornea always remaining superficial, the main stem sending off small branches July 10 it was again cauterized, and Fowler's solution substituted for the quinin, 5 drops three times a day In a few days the ulceration ceased and the cornea soon healed (Fig 2) At no time in the course of the disease, was there any hypopyon or any evidence of inflammation of the iris The opacity that remained some time was not very dense, and when the patient was last seen, seemed to be clearing away rapidly

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[6] Centralblatt f praktische Augenheilkunde 188?, p 302-311

Transactions of the American Ophthal Society, 1880

[8] Op cit

[9] Op cit

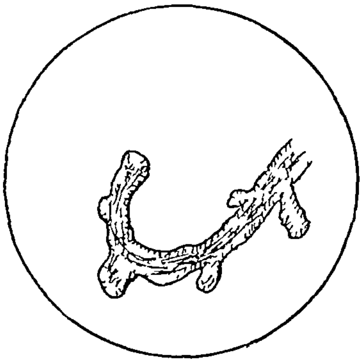

FIGURE 2

Case 3—O H, German, age 24, came under my care at the Cook County Hospital Oct 8, 1892 Had hemorrhage of lungs two years ago, and was inoculated with Koch's tuberculin Has lost flesh lately Had some inflammation of eyes five years ago, and was fourteen days in a hospital Two weeks ago recovered from an illness which was characterized by chill followed by fever and sweating, the paroxysms occurring every second day Present trouble of right eye began two weeks ago with redness, dimness of vision, photophobia, lachrymation, pain and continuous irritation which gradually grew worse On examination the conjunctiva was seen to be somewhat swollen and injected On the surface of the cornea were superficial ulcers arranged in a branching form These minute ulcers had become confluent in some places, while in others they remained separated from each other by a narrow isthmus of unbroken epithelium The instillation of a 2 per cent solution of fluorescein brought out this point very distinctly (Fig 3) During the examination the patient had a severe chill which began at 1 P M, followed by fever (T 105, p 120) and sweating The examination of the blood by Dr Hessert the house surgeon, showed the presence of the plasmodium malariæ Ordered 15 grains of quinin in divided doses that evening, and the same quantity the following morning, after that 5 grains every four hours, atropin and hot applications to the eye Patient improved rapidly, had no return of the chill and in a few days the ulcer was *healed leaving a faint opacity marking the course it had* taken There was no appearance of irritation of the iris

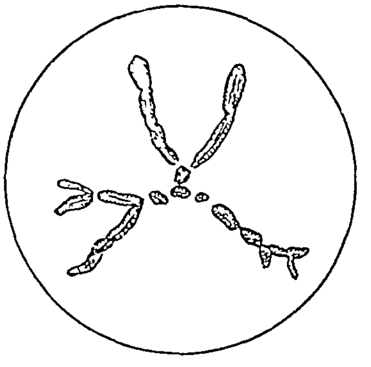

FIGURE 3

Are the different writers who contend that they are describing essential and distinct forms of corneal disease justified in their claims? Can it be proven that the "dendritic keratitis" of Hansen-Grut and the "keratitis dendritica exulcerans mycotica" of Emmert are separate and distinct forms of ulceration as these writers aver, or that Kipp's malarial keratitis is a variety occurring only as a result of miasmatic infection, or must we accept the opinions of Haab, Wangler Kendall and Hagnauer that all these cases properly belong to the class of herpes febrilis originally described by Horner

According to Haltenhoff,[10] to whose article in the *Annales d'Oculistique*, of June, 1892, I am greatly indebted, Hagnauer, in a thesis for his doctorate written in 1891, presumably under the supervision of Haab, complains that during the last twelve years several authors have described as new, forms of superficial keratitis which were so like the herpes of Horner as probably to be the same Hagnauer contends that the cases of Hock (Centralbl f Augenheilkunde, *December, 1885), Macrocki (Klin* monatsbl f Augenheilkunde, Mai, 1890), Gillet de Grandmont (Archiv d'Ophthalmologie, 1887, p 422) belong in the category of herpes febrilis He places also in the same class the cases of Kipp[11] and Van Millingen [12]

In spite of the rarity of intermittent fever in Zurich, five cases are ascribed to this disease. Kipp's[13] experience leads him to believe that malarial fever was the cause of the corneal disease in 90 per cent of all the cases in which the peculiar ulceration was present Furthermore, he thinks the affection is identical with that described by Hansen Grut and Emmert, and does not doubt that it is of a mycotic nature

The contention of the latter authors that in cases of dendritic ulceration there is no question of vesicles does not seem to be well grounded, since most cases would probably present themselves to the surgeon only after the delicate epithelium covering the vesicles had broken down, when only the minute ulcer would be seen Haab has had the opportunity of seeing but one case in which the vesicles were intact The further observation of these writers that in their cases there was no coincident herpes of the face, nor any febrile affection that would be likely to occasion such an eruption, only accords with the forty or more cases of Kendall, and the cases of others in which there was either no previous illness, or it was so slight as to pass almost unnoticed The fact that in some cases the subjective symptoms of pain, photophobia and lachrymation are marked, and in others quite insignificant, certainly does not furnish a very accurate differential sign

That attacks of malarial fever may induce an ulceration of the cornea that assumes a dendritic form, as has been so ably presented by Kipp, is unquestionable, but that the keratitis and the resulting ulceration are the direct result of the malarial poison is to be doubted The fact that in many of Kipp's cases there was a simultaneous eruption of herpes vesicles on the face would point rather to the explanation that the corneal trouble was also herpetic, and that the small vesicles quickly breaking down and becoming confluent, left the irregular *branching ulceration In my third case (Fig 3),* which to my mind was unquestionably induced by the malarial fever, this point seemed to be clearly demonstrated In this case, as shown in the figure, there were some very minute ulcers which seemed to be separated from the others in the branch by a narrow isthmus of unbroken epithelium, suggesting that the branch had been formed by the confluence and breaking down of little vesicles that were adjacent The staining of certain points in the branch more deeply than others with fluorescein, seemed to indicate that these were the points of the original infiltrations That anti-malarial treatment acts well in cases in which there is malarial poisoning has been pointed out by Kipp,[14] Hotz[15] and others, but this can hardly be cited as proof of the direct relation between malaria and dendriform ulceration In Case 2, the exhibition of arsenic in 5 drop doses of Fowler's solution apparently worked like a charm, but I am still in doubt as to whether it was the anti-malarial or the caustic treatment that effected the cure

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[10] Annales d'Oculistique, June, 1892

[11] Op cit

[12] Centralbl f Augenheilkunde January 1888

[13] Trans Amer Ophth Soc, 1889, p 331

Hagnauer observed sixteen cases of herpes corneæ, in a period of six weeks, in patients affected with the grippe, and Hansen,[16] Pfluger,[17] Greff,[18] Eversbursch[19] and others, have recorded cases observed in the last epidemics of influenza, that in appearance simulated keratitis dendritica It seems quite probable that future observations will tend to simplify the pathology of this interesting subject by classifying all dendriform ulcerations as herpes of the cornea, rather than adding the complication of another variety of keratitis

70 State Street

TWO CASES OF BRAIN TUMOR WHERE OPTIC NEURITIS WAS THE ONLY POSITIVE SIGN—AUTOPSIES

Read before the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY EDWARD P MORROW, M D
OPHTHALMOLOGIST TO AULTMAN HOSPITAL, CANTON, OHIO

Although pathognomonic symptom is a term in medicine, yet taken in its strict interpretation we have no symptom by which we can positively determine a disease without question Taken in its better sense, a characteristic symptom of a disease, we may call optic neuritis a pathognomonic symptom of brain tumor This has been so well established that it needs no discussion The object of this report is not to further establish that fact, but to present two cases where optic neuritis was the first, and up to the time of its discovery, the only positive sign upon which a diagnosis could be based For that reason I take it, brain tumor, with its ophthalmic aspects may be worthy of a discussion here, inasmuch as the ophthalmologist is sometimes called upon to give his opinion and to aid in the diagnosis of a case To give positive or negative evidence as to choked disc may be all that is asked of him, but if he is also able by his knowledge of the relation between choked disc and intracranial diseases to differentiate between abscess, tumor, aneurismal tumor, etc , as well as to give some opinion as to its probable location within the skull, his services will surely be of more value than those of the specialist whose knowledge as well as his practice is limited to the eye

Case 1—Is a lad 17 years of age, well formed and well nourished, of good parentage There is a large family of boys and girls all in good health In April, 1887, he had a fall from a bicycle, striking his head and rendering him unconscious, from which he promptly recovered From that date, however, he was under treatment from time to time, for what his physician supposed to be a general run down state He had no special symptoms except weakness and malaise with occasional dizziness when walking The physician under whose care he was at that time, tells me that at no time did he have any symptoms that led him to suspect any cranial trouble In November, 1887, the family changed physicians and employed Dr James Fraunfelter of Canton, Ohio The boy made occasional visits to his office, complaining mostly of dizziness and occasional vomiting The Doctor suspected some head trouble, but continued to treat him expectantly until in December, when he took to his bed, saying he was too tired to be about Shortly after this he complained that his vision was imperfect and confused My service was asked Dec 15, 1887, to determine the cause of his eye trouble, and if possible shed light upon the diagnosis I found the patient in bed His greatest complaint was that he was tired, did not sleep well, and did not want to exert himself While he had had occasional headaches up to this time, they had not been severe nor localized There was no paralysis or febrile condition An examination of the eyes revealed moderately dilated pupils, that reacted to light rather sluggishly

With such tests of his vision as could be made, it was found that he could read large types and distinguish objects in the room His confusion of vision was probably diplopia, although it was impossible to make tests to prove it Such tests as could be made showed no paralysis of ocular muscles The ophthalmoscope showed at this time a double optic neuritis in the swollen stage, with numerous retinal hemorrhages in the region of the disc The revelation of the choked disc with the history of the head injury and character of the symptoms led at this time to a provisional diagnosis of cerebral abscess in the latent stage The later gradual and uniform development of symptoms changed the diagnosis to that of brain tumor These symptoms were, gradual and increasing pain, localized to right side, vomiting, gradually increasing in frequency Facial paralysis and paralysis of external rectus muscle of right side At no time was there rigor or rise of temperature, nor were the symptoms sudden or rapid, thus excluding any suppurative process During the last week of his illness he had several epileptiform convulsions, except during these, he retained consciousness and a fairly good intellect up to the time of his death, which occurred the last week in January, 1888, five weeks after the ophthalmoscope revealed the optic neuritis

Autopsy—Body fairly well nourished Calvarium removed, external and internal surface of skull normal Calvarium not unusually adherent to dura mater, dura mater hyperemic Surface of brain when dura was removed showed no abnormality or asymmetry No unusual amount of fluid in arachnoidal space Brain removed without membranes The optic nerves when exposed showed to sight and touch no unusual appearance Longitudinal sections of the brain were made from above downwards The tissues were normal in appearance and consistency until the temporal lobe of right side was reached, here the tissues began to soften from above downward until a glioma pear shaped, amber in color, soft and somewhat commingled with the cerebral substance was found, lying at the base of the middle lobe Its long axis, more than two inches, was directed backward and inward The large end, over an inch in diameter, was backward and within the temporo-sphenoidal lobe, the small end forward and outward

Case 2—Also a young man, 19 years of age The history I obtained is imperfect, as he was living in the country and did not consult any physician early in his trouble When he did, he went the rounds of all of them, so that it is impossible to get any connected report In November, 1892, he came into the hands of Dr J F Marchand of Canton Ohio, with whom I saw the case, and to him I am indebted for the following history of symptoms he first complained early in the summer of 1892 of an unsteadiness of gait, this continued until late in the summer, but was not sufficiently annoying for him to seek advice Later, however, he had seasons of vomiting, and for this he saw a number of physicians without relief In September of the same year he took to his bed, not because of any inability to be about, but apparently from the beginning of a lethargy which continued to develop and from which he never could be wholly aroused When I first saw him in November, 1892, he was vomiting considerably and had by this time become somewhat emaciated His intellect was dull, his condition was passive in the extreme He answered questions in short, shouting monosyllables, yes or no It took him considerable time to understand what was said to him, but when he did understand, his answers were intelligent and correct He complained of some headache, but it was seldom severe, and at this time not localized The first examination of the eyes made at this time revealed widely dilated pupils Eyes straight Tests showed remote and proximate vision normal The media were clear and fundus normal, except considerable hyperemia of the disc, which by subsequent examinations proved to be commencing optic neuritis Under treatment with bromids and ergot his vomiting ceased for quite a period and his condition somewhat improved

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[14] Op cit
[15] Chicago Med Journal and Examiner December, 1881
[16] Hospitals Tidende 1891
[1] Reviewed in Annales d'Oculistique Fev 1892
[18] Berlin Klin Wochenschrift Nr 27, 1889, Ibid
[19] Münch Med Wochenschrift S 89 1889

A subsequent examination made January 15, 1893, showed a double optic neuritis in the swollen stage, with numerous hemorrhages in the retina There was still considerable vision, as he was able to read a typewritten address on an envelope and other such tests as could be obtained There was no paralysis of any muscle of the body, and at no time up to the time of death did any develop The subsequent history is one of constant decline Emaciation became extreme, although he ate largely and vomited but little Toward the end he became blind, developed the cephalic cry and was reduced to imbecility On the morning of March 12, 1893, he ate a hearty breakfast and died almost instantly afterwards

Necropsy—Body greatly emaciated, calvarium removed, membranes anemic, no arachnoidal fluid, brain removed without membranes, surface of brain showed no asymmetry, but bloodless Sections of brain made horizontally from above downward, nothing abnormal except anemic condition until ventricles were opened These were enormously enlarged and distended with fluid Further sections of the cerebrum showed no evidence of lesion When the cerebellum was examined a tumor, disc shaped, about one half inch in thickness and two inches in diameter, was observed upon the superior surface of the cerebellum, covering the superior vermiform process and extending about equally over each lateral hemisphere The tumor was a soft glioma and broke down under slight pressure An examination of the optic nerves showed nothing abnormal to sight or touch

Among the points of interest, those especially claiming attention are I think, 1, that the ophthalmoscope was the first to give objective and positive evidence of a cerebral lesion in either case, 2, the obscurity of the symptoms and the similarity in both cases of cerebral abscess in the latent stage In Case 1, a positive diagnosis was not made until late, on account of the head injury being taken as a cause of abscess In Case 2, a diagnosis of brain tumor was made, not because of any uniform symptoms of brain tumor, but because of the absence of any ascertainable cause of an abscess, 3, the location of the tumor Tolerance of the nerve elements of the temporal lobe has been shown many times in abscess following injury or ear diseases Tolerance is also shown in Case 1 to a tumor in the same location until it reached considerable size, when by encroaching upon the sixth and seventh cranial nerves, strabismus and facial paralysis resulted

In Case 2, the remote position from intracranial nerves would account for the absence of paralysis of parts supplied by them The mental condition in Case 2 was due, not to the location of the tumor primarily, but in all probability to the great distension of the central cavities of the brain and the consequent anemia, with its effect upon the nutrition of the elements We find, however, in both cases, that while the other intracranial nerves tolerated the neoplasm, that the optic nerve succumbed to inflammation

A point of interest in the autopsy is the absence of fluid in the arachnoidal space in both cases, as well as the apparent normal state of the optic nerves to the unaided senses No microscopic examination of the nerves was made to determine the condition of the sheath or intervaginal space

Of the two prominent theories advanced for choked disc, namely, the lymph space and the vasomotor paralysis theory I can not see that these cases add to or subtract from either Certain it is that our knowledge of the pathology of optic neuritis is unsatisfactory and that neither of the theories, clever and enticing as they are, are able to withstand criticism or investigation The conclusions reached by Gowers[1] are rational and in accord with the present state of our knowledge He says "It is probable that optic neuritis is rarely due to a single factor, and that the most potent element is the descent of a process of tissue irritation, which when it reaches the papilla sets up a more intense inflammation, that in some cases this influence is alone effective, that in others it is aided by the distension of the sheath which hinders the escape of effete products, increases edema, or even conveys irritating material

"The distinction between optic neuritis and choked disc is one of degree and not of mechanism So far as optic neuritis has any single significance, it is that of an irritative process within the skull"

Dr. de Schweinitz—I have listened with interest to Dr Morrow's paper, and would urge the importance of placing upon record, in connection with careful ocular examination, all cases of intracranial lesion, especially tumors, in which the position of the disease had been substantiated by a necropsy

We all know that there are the so called "quiet regions" in the brain I had a case in my own practice, of large tumor of the right frontal lobe, without the presence of active symptoms until about thirty hours before death The tumor occupied the white matter of the right frontal lobe as far back as the bases of the first and second convolutions, and from the ventricular surface involved the head of the caudate nucleus, and by softening, the structures as far back as the thalamos, and yet was practically, if not entirely, quiescent Optic neuritis had been present for some time and was probably the only symptom of the brain tumor until thirty hours before death, when convulsions, hemiplegia and conjugate deviation of the head and eyes to the left side were noted These symptoms were the result of a fresh hemorrhagic lesion in the left crus and on the left optic thalamos

I would urge the importance of a careful examination of the field of vision in all cases, especially if operative interference upon the intracranial lesion is contemplated I have the report of a case of epilepsy, not Jacksonian in type, which has existed for two years, with no other symptom save the convulsive attacks and headaches The fields of vision were concentrically contracted Two years later double optic neuritis and left lateral hemianopsia were manifest On the strength of the late development, hemianopsia, Dr Wood diagnosticated a secondary lesion in the cuneus, thinking it probable that the original lesion, a tumor, was connected with the cerebellum, because this was the 'region of silence" nearest to the area which gave evidence of the disease by reason of the hemiopic defect in vision The patient was trephined by the late Dr Agnew, and a cystic tumor, or area of inflammatory degeneration, found within the cuneus beneath the gray matter The patient died, and at the autopsy a large tumor occupying the second and third temporal convolution of the right side and approaching the fourth convolution, was discovered, together with a patch of hemorrhagic softening in the cuneus and a line of softening running nearly the whole length of the center of the occipital lobe The field of vision in this case correctly located a lesion in the cuneus, although it gave no evidence of the tumor in the temporal lobe on the right side, which hence may be involved without the production of immediate direct symptoms This case, utilized to illustrate the importance of the field of vision in localizing intracranial lesions, has been fully reported, both from the neurological and the surgical aspect, by Drs Wood and White

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[1] Lectures on the Diagnosis of Diseases of the Brain W R Gowers M D, F.R C P, 1885, p 164

Dr Morrow—In reply to Dr de Schweinitz's remarks regarding the field of vision, I will say that it was impossible to get any satisfactory tests of the field Such rough tests as were possible were of no value, and so were not reported

I believe it to be highly important to impress upon the general practitioner the necessity of early and frequent examinations in cases of suspected head trouble, as well as in those cases where the diagnosis is clear, for the reason that positive evidence can often be obtained by the ophthalmoscope and perimeter, both as to the condition and location, that would escape other means

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PURULENT OPHTHALMIA FROM THE STANDPOINT OF ITS SPECIFIC MICROBIC CAUSE,

WITH A PLEA FOR A MORE ENERGETIC, RATIONAL, ABORTIVE TREATMENT WHERE POSSIBLE

Read before the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association at Milwaukee

BY ALFRED HINDE, M D

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(*Concluded from page 564*)

Mauriac[37] decides that "the abortive treatment is indicated and has some chances of succeeding in acute gonorrhea only during the first hours of its outset" Diday[38] believes "That in the early stage every gonorrhea can be aborted," and "that the abortive treatment is neither locally nor constitutionally dangerous" Two methods may be followed a strong solution may be used for a short time in the urethra or a weaker solution may be left in contact for a longer time A 5 per cent solution of nitrate of silver is allowed to remain in the urethra from forty to ninety seconds, according to the pain produced A free discharge occurs after two days, and as a result of the burning may continue for four days and then gradually ceases in a few days more The abortive treatment is considered worthy of trial in view of the serious complications at times following a gonorrhea *If possible complications govern the use of abortive treatment of an urethral gonorrhea how much more urgent is this plan in a similar inflammation of the conjunctiva, because of their infinitely greater frequency and more deplorable results to the eyesight of these cases* According to Horner[39] the blind in different countries owe their loss of eyesight to this disease in from 20 to 79 per cent

In the newborn eye, Credé[41] of Leipsic, recommended the instillation of one drop of a 2 per cent solution of nitrate of silver and had the satisfaction of noting a reduction of purulent attacks from 7 5 to 0 5 per cent In the lying in hospital of Halle,[42] under the same treatment these cases fell numerically from 12 to 3 per cent *The mechanical*[43] *removal or the destruction* of *the gonococcus is the therapeutical indication in all these cases Remove the discharge and the loosened epithelia by watery solvent and brush, using at the same time and in the meantime an innocuous solution of the most powerful microbicide we possess* The personal element in the treatment of all diseased conditions enters largely, and the followers of a plan are not always as successful as the originator On this account, though all agree upon the same remedy, a few still advocate its use in strong solutions most carefully applied, for direct destructive effect, whereas, a more numerous company nowadays use nitrate of silver in weak solutions more freely and without injurious risk and with equally good results *Without known exception, it is decided that the remedy should only be used after suppuration has commenced*

Such a conclusion I most forcibly condemn as inaccurate and unscientific, and cite as my authorities the pathological facts of this paper, and those of my own clinical experience For years past I have looked upon all forms of conjunctivitis as closely associated with mycotic processes, and have treated them on anti bacillary lines, and invariably their severity and duration have been most favorably modified thereby If one microbe can produce a colony, and the latter only results in that wonderful process of attraction of leucocytes from blood vessel to mucous surface, and which we designate suppuration, where is the wisdom of waiting microbic multiplication with its resultant pus before applying our anti-bacterial methods *Here, without bacteria no pus* is sound antiseptic teaching, and if we destroy, or remove them from the conjunctival surface, where recently implanted, or few in number, we will avoid the appearance of suppuration and escape entirely the so called acute stage of the cases under consideration

Under any circumstances ample irrigation with thorough brushing of the conjunctival surface for the mechanical removal of secretion and microbes fills the indication For the purpose of removing microbes from an infected instrument, H Knapp[44] in 1886 found that irrigation with running water was insufficient, but by rubbing the blade with his fingers at the same time as washing and afterwards polishing with a towel he succeeded in sterilizing it Gayet[45] of Lyons, after carefully disinfecting the conjunctival sacs of his cataract patients still found that microbes remained in 75 per cent of them on making cultivation experiments Hence simple water, or solutions of antiseptics, with irrigation of the conjunctiva alone, are insufficient to insure thorough cleansing, and Knapp's rubbing of the instrument finds its parallel in a thorough brushing of the conjunctiva This method, however, did not suggest itself to me in this way, but was thought of as an ordinary common sense procedure If brushing will remove germs from a dermal surface why not also from a mucous membrane?

A fountain syringe and light pressure was suggested years ago by Dr C S Bull[46] A mucous solvent in the shape of bicarbonate of sodium, will be a good addition to simple sterilized water, and again it is indicated because the gonococcus grows best in an acid medium, and Dr M A Castillan[47] called attention to this fact and recommended its use in gonorrheal cases in solutions of 8 to 10 per cent He claimed that in old cases in which other remedies had failed the alkaline medication "led to rapid and complete recovery" In a later communication[48] he claims to have had excellent results in acute gonorrhea from the use of a 1 per cent solution A watery solution of boric acid can be used ad libitum, though we can not say this of solutions of corrosive sublimate, for Dr Friedheim[49] of Leipsic, working in Prof Neisser's clinic, has called attention to the fact that "perchlorid of mercury even in solutions of 1 to 20,000 causes pain and the anti-bacillary action is not great" in gonorrheal cases The conjunctiva, however, is not as sensitive as the urethra to this remedy, idiosyncrasy being excluded

Freidheim had an unusual advantage of observation, in 1,200 cases of gonorrhea, difficult of cure by the ordinary plans, and in the laboratory of discovery of the gonococcus, his investigations were carried out on anti-bacillary lines, and his conclusions are worthy of our attention in so far as we can apply them to the treatment of the conjunctival inflammation He tried to find out the best remedy that on local application would most completely *kill the gonococcus, lessen the inflammation, and promote epithelial desquamation* The best[50] results were obtained from a solution of nitrate of silver varying in strength from 1 to 4000 (gr $\frac{1}{8}$ to ℥i) to 1 to 2000 (gr $\frac{1}{4}$ to ℥i) Injections of the amount of 300 minims and retained for three minutes, were made three to six times daily, which were followed by increased and more purulent discharge "But in about four days the secretion diminishes, becomes thin and contains a quantity of epithelium The gonococci also diminish in a remarkable manner and after a few days disappear altogether When this has taken place the number of injections of nitrate of silver is reduced to two and afterward to one daily, and other injections such as boric acid, or some preparation of zinc (or tannic acid) are used as well But in spite of the almost total disappearance of the discharge the one daily injection of nitrate of silver is to be kept up for many weeks" Where nitrate of silver is not so well borne even in weaker solutions than those mentioned, a certain amount of success was gained by substituting solutions of "salicylate of mercury 1 in 270, with sodium chlorid, which completely destroys the cocci without much concomitant irritation" Other local remedies are referred to only to condemn, because of their uselessness as anti-microbics in permissible strength without producing undue pain and inflammatory reaction "In the very rare cases in which no antibacterial injection could be tolerated internal remedies were resorted to" *The best preventive of complications was found in the use of nitrate of silver injections* Neisser himself, at the recent meeting already referred to, when considering treatment, says that medicines should only be used which "*a*, destroy gonococci, *b*, increase the inflammation as little as possible, *c*, have no injurious action upon the mucous membrane, such as solutions of nitrate of silver 1 to 1-4000 to 1 to 1-2000, ammonia sulpho ichthyolate 1 to 100, sublimate 1 to 30000 to 1 to 20000" Thus science teaches what empiricism has long known by clinical experience, that of all remedies nitrate[51] of silver is the one *par excellence* for specific catarrhal inflammation of mucous membranes Our therapeutics have scarcely advanced in equal ratio with our recent bacteriological progression, yet the foregoing observations are sufficiently exact to show us that *weak solutions of this favorite remedy are amply sufficient to destroy the gonococcus without endangering any of the ocular tissues, and without causing undue pain and inflammatory reaction*

With the foregoing data as a guide I have long treated my conjunctival catarrhs with such satisfactory and rapid recoveries that now I care not whether they are specific or simple in character provided they are seen before complications of the eyeball impend, or have already occurred, provided also that my patient, or friends will intelligently favor and follow the treatment prescribed

When seen during the incubative stage I regard with especial probability of a specific origin all cases of rapidly increasing conjunctivitis in the newborn in females of every age and condition, in right eyes in right-handed, and in left eyes in left-handed adults

If suppuration has already ensued, or, in adults, if inquiry elicits the information of a gonorrheal focus previous to the appearance of the eye inflammation, the diagnosis is without difficulty

In all these cases free irrigation of the conjunctival sac, with thorough brushing of the tarsal portions and the retrotarsal folds is at once resorted to, generally without, but occasionally preceded by the use of a solution of cocain It is largely a matter of choice, in my opinion, whether you use sterilized water, solutions of bicarbonate of sodium, or boracic acid, or the weaker solutions of bichlorid of mercury The freshly made solutions of nitrate of silver of 1 to 4000 to 1 to 2000 appear to be of added advantage, and latterly I have, with increased satisfaction, *brushed into the affected membrane in the absence of ocular ulceration, a limited amount of a 2 per cent solution of nitrate of silver, washing off all excess after the brushing is ended* For a brush I cut off, evenly, half the length of fur of an ordinary camel's hair pencil, and find that the remaining stub is sufficiently firm for the purpose required *The brushing is continued until the parts are thoroughly clean and free from all secretion* Where cocain is not used, some pain is complained of, and continues for a time after each treatment This can be prevented by the use of cocain before and during this short period of irritation The ice cold applications of sterilized water, or weak antiseptic solutions on sterilized cotton, that are always applied in the foregoing lid and fornix inflammations, and used continuously between treatments and instillations, very quickly control any reaction due to the brush, and patients rarely complain of the method of treatment so great and rapid is the relief they experience from the severe eye symptoms of which they at first complained In private practice daily brushings are carried out, but in dispensary cases where this is impossible it was found that when applied every second day the diseased process was rapidly controlled

After two to four such thorough brushings the case is completely changed from a severe acute to a slight chronic inflammation with a corresponding decrease in the number of pus cells of the discharge Further require ments are simple removal of the exudations and two or three applications, once in twenty-four to forty eight hours, of a 1 to 2 per cent solution of nitrate of silver, kept up until the reduced succulency of the mucous membrane and the decreased discharge call for the transient use of the usual astringent solutions

If the foregoing method is adopted early enough and done thoroughly, complications never occur, and the duration of the infection is halved

In those further advanced cases where ædematous, thickened, and inflamed lid tissues prevent eversion of the upper lid, irrigation of the eye is as thoroughly accomplished as is possible, and where the cornea is intact, free use of two or three drops of a 2 per cent solution of nitrate of silver, instilled into the conjunctival sac and the lids lifted from the ball so as to permit the remedy to reach the ultimate confines of the fornices, is the chosen plan of treatment After waiting a few moments the eye is again flushed with simple diluent, and ice cold applications, and half hourly antiseptic instillations applied between daily office treatments

The lid swelling is thus rapidly reduced so that turning can be accomplished in one to two days, and the described brushings resorted to In those cases, when first seen, where complications of the eyeball impend, from lid-pressure causes, free canthotomy is done, because of its being the lesser of two evils The part that the ocular conjunctiva plays in these specific inflammations appears to be different in its resulting exudate from that of the palpebral portion and that of the retrotarsal folds The exudative inflammation of the latter is peculiar in the fact that its cellular elements are so numerous, whereas the chemotic exudation of the ocular, or scleral conjunctiva consists largely of fibrin-forming elements with some serum and few emigrating leucocytes

A thorough believer in the bacterial pathology of to-day, and *recognizing the character of the exudate into the scleral conjunctiva in the chemosis of these cases, I consider as worse than useless, for the purposes of pressure relief of a threatened cornea, the scarification of this portion of the conjunctiva* Knowing that, because of its connecting tear passages and on account of the presence of the ubiquitous pus microbe, it is practically impossible to insure aseptic operation of the conjunctiva under the best possible conditions of freedom from inflammation, as Fick,[52] in forty-nine perfectly normal conjunctival sacs, found only 12 per cent without bacteria, and thirty-six others, affected with slight catarrh, contained them, knowing that an army of microbes, in these purulent cases, is only waiting a doorway of entrance, that fortunately the compact stratified epithelium of the scleral conjunctiva and cornea prevents, so that they can readily attack and overcome the tissues with greatly lessened physiological resistance on account of their impaired vitality,—how then can we expect to aid the nutrition by wounding without removing the fibrino plastic exudate, and simultaneously opening up the lymph channels of the conjunctiva and subconjunctival spaces, these communicating with the same channels of Tenon's capsule, and those of the latter with similar lymph vessels within the sub choroidal[53] space of the eyeball, the pus microbes thus finding a ready made entrance with a possibility of terminating the case in the form of a suppurative choroiditis and loss of the eye This exudate may temporarily block the entrance way of the pyogenic microbes, but it is also the choicest soil for their growth and multiplication *For these reasons incision of ocular tissues for therapeutic purposes ought only to be a dernier ressort in infective inflammations of the conjunctiva Moreover, in all purulent cases where early, effective, rational treatment is carried out experience has shown that it is never necessary*

In the intervals between the personal treatments of these cases half hourly to hourly instillations of solutions of boric acid 2 per cent to 4 per cent, solutions of sublimate up to 1 to 5000, and fresh solutions of the nitrate of silver 1 to 4000 to 1 to 2000 have been used for home treatment Of the above solutions I prefer those of nitrate of silver, and use them in all cases where reactionary irritation is slight or absent and the cornea intact Many cases are greatly benefited by their use three or four times daily, the milder solutions being used in the meantime

Low temperature of the lids checks the multiplication of the microbes and continuous ice-cold applications soon reduce the swelling, pain, and increased temperature of the ptomaine-poisoned parts These are used as long as the acute inflammatory stage continues, and are afterwards directed subsequently to each caustic treatment and kept up until the reactionary irritation has disappeared

If when the case first appears there is ulceration and infection of the cornea sublimate solutions are chosen for irrigants, and, after cocainizing the eye, a 1 to 500 solution, on a cotton-tipped probe, is accurately and thoroughly applied to the ulcerated surface once daily, holding the application against the cornea for five to fifteen minutes The sublimate is five times[54] stronger than carbolic acid as an antibacterial agent and the appearance of the eye after its use, as above, is free from that unsightly whiteness that carbolic acid, in its 95 per cent solution, produces All excess of solution is avoided and the eye is afterward irrigated Where the cornea alone is involved, myotics are chosen as additional remedies, not on account of their mycotic action, but because, after a preliminary transient increase, they produce a decrease of the intra ocular tension by contracting the blood vessels, thus decreasing serous exudation In this way they sustain somewhat, if they do not actually increase the nutrition of the inflamed and softened corneal tissues (Ad[55] Weber), by limiting pressure from behind A mydriatic is the remedy where iritis or cyclitis impends, or has occurred, and in such cases only, because, after a preliminary reduction of tension, the intra ocular fluids are increased by it, resulting in increased intra ocular tension and added pressure from behind upon the inflamed cornea that will probably produce a staphyloma, and perforation of the latter On this account a supportive compress bandage over the affected eye should in all these complicated cases be worn during the intervals of treatment Paracentesis of the anterior chamber through the bulging cornea is never performed by me until perforation is assured, or positive, progressive, intra-ocular infection has supervened—for the reasons already given Again, repeated[56] experiments and clinical observation have shown that the eyeball, like other parts, can take care of without injury, and overcome or absorb, a certain proportion of infective bacteria without loss of the organ Once more a[5] hypopyon is frequently of non-microbic origin and its substance free from bacteria, and it is readily absorbed without damage to the eye It is therefore in those cases only where the infection overcomes all resistance, either from the number or virulency of its microbes, that section is called for, and in these cases even, it can scarcely do more than relieve the tension pains of a panophthalmitic condition

After the onset of ocular complications hot applications are used instead of cold ones, because they are more anodyne and comforting and less likely to further impair the decreased vitality of the tissues of the eyeball I almost invariably advise them as hot as can be borne and applied with sufficient frequency and continuity to control all pain They are used until reparative processes are well established The antiphlogistic and supportive eye bandage is retained until the repaired cornea is again unyielding, as is also the myotic, unless contra indicated as above

In one-eye cases the fellow eye is, where feasible, protected from the possibilities of infection by the usual eye shields

Since instituting the foregoing treatment in my practice the lessened fear of cases of purulent ophthalmia has been conducive to increased personal comfort Under it and when seen early the prognosis of simple and specific catarrh of the conjunctiva is practically the same Where the treatment is faithfully carried out complications do not occur The duration is greatly reduced Where complications already exist, the only eyes that are lost are the ones, when seen, involved in a virulent, progressive and unencompassable ocular infection in which all therapeutics are without avail The plan of procedure is but the compilation and application of facts gathered from numerous sources Whatever originality appears has been born of careful observation and clinical experience, and with the sole desire to rationalize our treatment and enhance the value of our methods in the management of these often desperate cases With full confidence I present this treatment for the consideration of those present, and feel assured that on its lines, faithfully followed, gonorrheal ophthalmia will fail to produce corneal complications in the usual three fourths of the afflicted eyes and will equally fail to make blind the 40 per cent as found by Klein[18]

CONCLUSIONS

1 That all cases of purulent conjunctivitis are of microbic origin and due to Neisser's gonococcus

2 That all cases originate from a gonorrheal focus, by devious paths, often, but not always traceable

3 That those parts of the conjunctival sac having a cylindrical, or a modified cylindrical epithelium, viz the palpebral portions and that of the fornices, are the seats of election of the micro-organism

4 That the location of the gonococcus on the mucous membrane is at first *super*-epithelial, then *inter*-epithelial, and still later *sub*-epithelial and all combined

5 That its special habitat is within the pus cell, yet it is also *extra*-cellular, as well as *intra*-epithelial

6 That the associated inflammation of the adjacent lid-tissues is due to the lymphatic absorption of the ptomaines of the microbe

7 That the compact stratified epithelial layer of the scleral conjunctiva and cornea is very resistant to the attack of the gonococcus

8 That ocular complications are due to pressure necrosis, producing an *infection atrium* through which the streptococcus and may be the staphylococcus find ready entrance to tissues with greatly impaired physiological resistance, and often rapidly destroy them—resulting in perforation of the cornea, intra ocular infection and loss of the eye This is a secondary infection

9 That the therapeutical indication is the mechanical removal or destruction of the gonococcus, with its ptomaine, and that if this is done early and thoroughly in the weeping stage, the period of acute inflammation will be cut short and the ocular complications avoided

10 That it is well in the incubative stage, even without positive evidence of a gonorrheal origin, to regard with suspicion all cases of severe monocular catarrh, and especially so in the female, irrespective of age or condition, and to treat them as if due to the gonococcus

11 That the mechanical removal of the discharges and the loosened epithelia and therewith the microbe and its ptomaine, *by thorough brushing of the palpebral conjunctiva and that of the fornices and* ample flushing of the conjunctival sac with simple diluents or weak microbicide solutions fulfills the etiological indication, and is non-injurious in all severe cases of *simple* catarrhal conjunctivitis

12 That of all local remedies nitrate of silver is the most potent and, at the same time, least irritating microbicide we possess It prevents complications, and can be used in sufficient strength to destroy the gonococci without risk of injury to *intact* ocular tissues, and that solutions of greater strength than 2 per cent are unnecessary

13 That in cases, when first seen, where complications already exist, brushing of the palpebro-fornix conjunctiva should be resorted to with thorough frequent irrigation of the conjunctival sac,—preferably with sublimate solutions up to 1 to 5,000 If undue lid-pressure exists *free* canthotomy is advisable, but scarification of the sero-fibrino-plastic chemosis of the scleral conjunctiva does not relieve exudative pressure on the ocular tissues, and it opens the doorway for secondary infection with pus microbes and is a dangerous proceeding

14 Where the cornea alone is inflamed, the added guarded daily use of a bichlorid solution 1-500 to the infected area is the best treatment, together with myotics, not on account of the latter's mycotic action but because, after a preliminary increase, they reduce intra ocular tension by contracting the blood vessels and diminishing serous exudation, and thereby they improve the nutrition of the ulcerated, softened corneal tissues *Paracentesis* of the anterior chamber, through the bottom of the ulcer, *is called for only in those cases where perforation impends, or where positive, progressive intra ocular infection exists*

15 The use of a mydriatic is best limited to those complicated cases where the uveal tissues are threatened, or inflamed, because, after a preliminary reduction, it increases intra-ocular tension by impeding the outflow of fluids from the eyeball, thus resulting in increased posterior pressure on the softened cornea,—impairing nutrition and aiding bulging

15 A supportive compress bandage is antiphlogis-

tic and of great use in preventing staphylomatous results in complicated corneæ, and its use ought to be continued until the healed cornea is again unyielding

17 Ice-cold applications check microbic multiplication, and ought to be used *assiduously* to the end of the acute stage, or until ocular complications ensue After the latter occur, applications as hot as can be borne are more comfortable and more conducive to the improvement of the nutrition of the impaired ocular tissues

18 As a prophylactic in monocular cases, the other eye ought to be sealed against infection, and the risks to others, from these cases, thoroughly advertised

19 The treatment of the initial focus of infection, where ascertainable in the affected subject, must be rigidly carried out on the same lines, and simultaneously with the conjunctival inflammation

16 Laflin Street

ARE AMERICAN WOMEN PHYSICALLY DEGENERATED?

BY EDMUND ANDREWS, M D, LL D

PROFESSOR OF CLINICAL SURGERY CHICAGO

Some wild errors are afloat on the subject of woman's supposed degeneration In the October number of the *North American Review* Dr Cyrus Edson, Commissioner of Health for New York, gives a horrible picture of American feminine "deterioration "

He says that ' there is at the present moment in this country a condition existing among the women which is the cause of the greatest alarm " It begins, in his opinion, in the schools, where by ambition and by rewards for success and disgraces for failure, growing girls are goaded to a disastrous amount of mental strain and over-brain work "Thus stimulated they drive their brains and do the work" until their physical powers are wrecked, and in an "enormous number of cases the women have broken down as the result of a lack of stamina sufficient to meet the physical strain of child-bearing " Again he says "An increasingly large proportion of the women of the American race are unable to perform their functions as mothers " "We seem to be able to bring the women up to a certain point in mental development, and then they cease to be able to be mothers " And again he says it is a "fact that an enormous and increasing number of our women are so exhausted physically" (by over study) "before marriage that the birth of one child, or at most of two children, leaves them physical wrecks "

Again Edson says "Let me briefly state facts as they are An American girl, educated as it is our pride to educate her, marries the man of her choice amid the warm good wishes of all her friends She is clever, bright, beautiful One, or at most two children are born, and if we meet her we scarcely recognize her She looks dragged and worn, she is fretful and peevish, she has become a burden to her husband worse than all, because it is the cause of all, she is a confirmed invalid "

Now this does not convey a correct impression The Doctor, if he does not quite say it, leaves the average reader to infer that an "enormous number" constituting a "large proportion" of the American women become "physical wrecks" and "confirmed invalids" after bearing "one, or at most two children "

Myself, and three friends while talking over these gloomy assertions, determined to "sample" the community, and see how many of the women known to us had become "physical wrecks" after bearing "one or at most two children " Each of us have an extensive acquaintance, not only in and around Chicago, but among families now located all the way from the Atlantic to the Pacific ocean With pencil and paper we jotted down all the families whose condition we knew, mostly of New England, New York, Pennsylvania and Ohio origin In short, they were nearly all purely American in blood We took them all impartially, sick or well, without selecting or rejecting on account of health

By a very moderate amount of conference together, supplemented by a little inquiry, we readily made a list of 163 families in which the mothers had borne from one to thirteen children Classifying them according to their health we found the facts as follows

1 Fifty-two mothers had borne from one to thirteen children each, and came out with robust, magnificent health, better than that of average men or women Three of these had borne respectively eleven, twelve, and thirteen children, and came through in brilliant health In fact the women with large families seemed on the average to come out the best

2 Ninety-five mothers, who had borne from one to eight children each came out in good, average, nice health, without being, however, so robust as the first class

3 Eleven were delicate, but not great sufferers

4 Five were confirmed invalids

No class of men or women is totally exempt from sundry ills, and occasional deaths but we could not find a single one physically wrecked by childbirth in a constitution exhausted by over study We found several who had been delicate before marriage, and became robust after bearing children

When deaths occurred among these generally healthy women, it was from the occurrence of mechanical injuries, typhoid fever, consumption, cancer, pneumonia etc, and not from previously exhausted systems "broken down under the physical strain of child-bearing "

These women, had already at the *time of our* enumeration produced about 545 children which averages over three and a third to each mother, and as many of them are still young, and nearly all healthy, they will yet add many more to the list of offspring

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[37] Paris Cor of the JOURNAL AM MED ASSOC quoted by the Medical Record Nov 3, 1888 p 552

[38] Gaz des Hôpitaux, Oct 13 1891, quoted by Medical Record, March 26, 1892 p 347

[39] Quoted by Noyes, loc cit p 299

[41] and [42] Noyes loc cit, p 300

[43] H Knapp loc cit pp 45, 46, pus microbes

[44] H Knapp Arch of Ophthal March, 1886, p 46

[45] Noyes Dis of the Eye 1890 p 213

[46] A Treatise on Dis of the Eye, J Soelberg Wells 1883 p 148

[47] Arch Med Bulges editorial Med Record May 26, 1888, p 586

[48] Medical Record Sept 19, 1891 p 347

[49] Provincial Med Journal, Jan 1 1890 from Arch für Dermat and Syph also Med Record, June 21 1890, pp 708–9

[50] Analysis in British Medical Journal l c

[51] Weeks' paper Medical Record Aug 3 1889 p 114

[52] "Ueber Microorganismen un Conjunctivalsack, Weisbaden 1887 From Noyes loc cit p 212

[53] Schwalbe quoted by Meyer Dis of the Eye 1887 p 618

[54] See paper by Weeks Medical Record August 3 1889 pp 113 14 In recently published lectures in the London *Lancet* Sir Joseph Lister regards carbolic acid used by his methods as possessing greater germicide qualities than corrosive sublimate For eye uses if not generally we are incredulous of the scientific accuracy of this conclusion

[55] Meyer Dis of the Eye p 75 Ed 1887 [56] H Knapp loc cit, p 44

[57] Ibid, pp 43 5 [58] Noyes, *loc cit p 310*

On the whole, we finished our extempore study with a cheerful conviction that the women are for the most part all right, and can be depended on to replenish the earth and rule in it in the future as they always have done in the past

No 6, 16th Street, Chicago

GOLD IN THERAPY

Read at the Meeting of the Mississippi Valley Medical Association, Oct 4, 1893

BY E A WOOD, M D
PITTSBURG, PA

Gold is one of the old remedies which has been crowded to the wall by the more brilliant achievements of modern pharmacy It is safe to say that one-half the medical profession never prescribe gold, the large body of the other half use it occasionally, while a very small minority employ it constantly in the class of cases in which it is best suited

Gold, practically, to the main body of the profession, is a new remedy From the company it has fallen in with of late, gold is open to suspicion, and whether it is a partner in the "Keeley Cure" or not, many will be prejudiced against it It would seem timely and just to drag the old drug from its dusty closet, and tear it away from its bad company that we may learn what standing it really deserves in therapeutics

What, then, is the pathological condition in which gold is especially indicated as a curative agent? Let us answer this question with as much precision as possible If gold has a place in therapy it must fill a special place, for it, like all other drugs, is no universal panacea What is its place?

What say authorities in reply to this question? In view of its great age, it is astonishing how meager the literature It is still more astonishing that until within a very recent period we had practically but one preparation of gold—the chlorid of gold and sodium That preparation to-day is the one given, and by it the standard of gold is rated as a curative agent Gold is as old a remedy as mercury, and yet gold to-day is almost unplaced in therapeutics The compounds of mercury are legion, its history voluminous, and its therapy accurately known and established We know more perhaps about mercury than about any other drug, we know less of gold than of most drugs

Authorities agree in declaring that the chlorid of gold and sodium is an alterative, behaving very like mercuric chlorid No author gives gold a very wide range in therapy, no one attempts to name the exact pathological condition in which it is best indicated and most efficient, and nearly all who have written on gold in therapy, whether designedly or not, succeed in "damning it with faint praise" Syphilis is one of the diseases in which it is commended, some say in the secondary lesions, others that it is best suited in the tertiary form The praise given gold in syphilis is not high, certainly not so loud as the praise given mercury It is said to be aphrodisiac and emmenagogue Tabes dorsalis, cirrhosis of liver, lungs and kidneys are said to be cured by gold Some praise it in diseases of the glandular system, especially in disease of the glands of the stomach and intestines, increasing appetite, and promoting secretion, digestion and nutrition It is said to give force to brain action, to give courage to the despondent, hope to the hypochondriac and content to the melancholic All speak of it as affecting the gums without salivation, producing an eruption of the skin and gold fever The latter I have never seen

That is the sum and substance of what therapeuticians say of the chlorid of gold and sodium But there are three questions which are still unanswered. First, is the chlorid of gold and sodium more efficient in the lesions named than any other drug? Second, is gold in therapy limited to the one double salt? Third, what is the special pathological condition in which gold is most efficient as a curative agent?

Leaving out the first question for the present, I shall undertake to answer the other two as observation and experience have taught me

My more immediate purpose is to direct your attention to some preparations of gold other than the chlorid of gold and sodium, samples of which are before you

The first preparation I shall notice, and the one with which I am best acquainted, through prescribing it for the past seven months in the place of the double salt, is the liquor auri et arseni bromidi. The successful combining of gold with bromin, mercury, arsenic and other metals, is owing to the indefatigable labors of Dr W F Barclay of Pittsburg, who persevered in face of the decree of some chemist that such compounds are impossible There stands the liquid bromid of gold and arsenic There stands the liquor of gold and mercuric bromid Here are other preparations of gold combined with other metals As there is no filtering employed in the manufacturing of these liquors, every atom of the metals must be present The two liquors are, as you see, beautifully red and transparent, elegant as the garnet fluids in the show bottles of a druggist's window I am not sure that it will not fade under exposure to light, but I know that after months standing not a shadow of sediment mars its complete transparency It is almost tasteless The dose—10 drops—contains one thirty-second grain of gold and one sixteenth grain of bromid of arsenic The mercuric bromid of gold contains one thirty-second grain each of gold and bromid of mercury to 10 drops, which is the dose Each preparation is pleasant to take, is more readily absorbed than the chlorid of gold and sodium and, in my experience, more assimilable and active than the double salt Of course the gold is modified and its action intensified by the combination with other metals It is probable that gold will readily combine with all other metals used in therapeutics

The class of diseases in which I have found gold to be peculiarly efficient, and in which it seems to be especially curative above all other drugs, is that class in which *sclerosis* is the chief factor In naming scleroses as a class, I am perhaps taking undue liberty with the nomenclature of the pathologist, since the term sclerosis is generally understood to mean induration of the tissues of the brain and spinal cord Literally, it is proper to apply the term sclerosis to any organ or tissue in which induration is the factor When we marshal such pathological conditions into a class, we shall find that sclerosis has a wider and, it seems to me, a more significant meaning than hitherto attached to the word and the lesions it names It would seem as though we have reduced therapeutics to an exact science when, instead of a name, we establish an exact pathological condition, with the remedy most efficient in removing that condition That is the exactitude we have in gold as a special curative agent in all forms of sclerosis

Cirrhosis of the liver, interstitial nephritis, atheroma and its associate, calcareous degeneration of the arteries The circumscribed induration following embolism or bloodclot in the brain tissue, senility and its train of decrepitudes—for what is old age but a general sclerosis—all belong to the class I have named Cirrhosis of the lungs, certain forms of consumption—fibroid consumption, miliary tuberculosis, and especially that form of consumption in which masses of lymph become organized in the lymphatics of the lungs as we see the process in the glands of the neck and called adenitis Without naming all the lesions that may be classified under the head sclerosis I will state, as my belief, founded on an experience of twenty years, that gold is far more efficient in them all than any other drug I know of I desire to say in addition that the liquid preparations of gold as combined with bromin, arsenic, iodin and mercury are as much superior to the chlorid of gold and sodium as is quinin over the crude Peruvian bark

In addition to its efficiency in the sclerosis it would seem as though gold, at least the liquor auri et arseni bromidi, exercises a power as a tonic and nutrient to the nervous system, especially to the nervous systems of those who have advanced to fifty and beyond May it not be that in cases of neurotic diseases of the aged there is a sclerosis? Certain it is that gold is not so efficacious in functional nervous ailments of the young It is just to remember, too, that the association of gold with bromin and arsenic may have very much to do with its curative powers But for all that, gold and its preparations is the medicine for those in middle life and in old age It stimulates the brain, incites a flow of spirits, gives sleep to the sleepless, courage to the despondent and intensifies sexual desire and power Gold should maintain physical vigor and prolong life even if taken when there is no disease except the inherited tendency to decay before reaching the Bible limit of life

In presenting a few cases taken from my clinical day-book I beg leave to remark that I appreciate incredulity, and with that thought before me I am guarded in my statements, feeling that a modest conservatism will be tolerated by you, whereas you would smile at and ignore the vivid praises of the enthusiast

E H, aged 57, roofer, temperate with good heredity and void of syphilis or any cachexia Had complained of what he was told was rheumatism of the knee joints since February, 1892 Visits to seashore, and Mt Clemens, together with medication from various physicians, did not arrest the disease which grew steadily worse On the 14th of May last I saw him with Dr Barclay His knees were swollen, stiff and painful, preventing rest or sleep He preferred to have his legs amputated rather than endure his agony We diagnosed the case as *Arthritis Deformans*, and put him on the liquor auri et arseni bromidi In six weeks time he pronounced himself cured, the pain and stiffness were gone and the swelling was very much reduced He still remains well up to date

R E M, aged 45 Heredity good Having treated him for a year for locomotor ataxia, by suspension, ergot and other usual remedies, I placed him on the liquor of gold last July He sleeps better, appetite improved, not so despondent, the girdle pain and the pain in feet is very much abated, but there is no improvement in the coordination He is still taking the gold

C T, periodical dramdrinker Took the gold two weeks, at the end of which time there were ulcers in the mouth and the teeth in lower jaw were loosened

M Mc, aged 52 Heredity good Very fond of women and noted for his sexual powers and endurance Had suffered for eighteen months with neuralgia of the left trifacial nerve Had tried various forms of treatment, among others that of having the sound teeth extracted from the left lower jaw, but without relief Speaking was painful, mastication impossible and swallowing of liquids agonizing He was haggard with pain and loss of sleep In spite of his protest, I treated him for syphilis by giving him mercury and the iodid of potassium He improved very considerably, but the pain persisted though to a slight degree, and grew worse on stopping the mercury In June last I put him on the mercuric bromid of gold, with rapid improvement, and he pronounced himself cured He still takes the gold occasionally

I have administered the bromid of gold and mercury in two cases of iritis with evident advantage

Two cases of fibroid consumption, with cavities, both the result of neglected pneumonitis, are astonishingly improving under the use of the bromid of gold and arsenic internally and the inhalations of papoid glycerol by the atomizer

One case of pneumonokoniosis, "grinders' consumption," had resisted treatment for four years, during which the patient lost in weight while cough and expectoration increased In July I put him on the bromid of gold and arsenic with papoid inhalations September 27, coughs a little on rising in the morning, expectoration no longer black Gained fifteen pounds in weight

One case of miliary tuberculosis in which the pulse was 130, temperature 101, respiration 30, is rapidly improving on the gold

Two cases of diabetes have improved under the use of gold, one of them so much so that he was accepted last August as a good risk by one of the foremost life insurance companies In both cases I gave codein at the beginning of the treatment, but left it off and continued with the gold

A case of adenitis, with enormous enlargement of left side of neck, is being rapidly cured by the bromid of gold and arsenic

Does gold ever fail to cure? Yes, if given in cases unsuited for it But in the scleroses, while it may fail, it will accomplish more cures than any other remedy

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POINTS OF DISSIMILARITY BETWEEN US AND HOMEOPATHIC PHYSICIANS

An Address read before the Lancaster City and County Medical Society, July 5, 1893

BY J L ZIEGLER, A M, M D

PHILADELPHIA

Mr President and Gentlemen —The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for May 27, 1893, publishes the annual address of the President of the Philadelphia County Medical Society, read May 24, 1893, by Jno B Roberts, A M, M D, entitled "Points of Similarity Between Us and Homeopathic Physicians"

Dr Roberts believes "that the tests of qualification for membership (in the Philadelphia County Medical Society) should not be the college from which the applicant received his diploma, but an education enabling him to understand and appreciate the science of medicine, and an honest purpose to treat his patients by all means and methods which experience, investigation and research show to be serviceable"

Admitting the proposition to be true, then one who graduates from the Hahnemann Medical College and desires to become a member of the Philadelphia County Medical Society, would have to repudiate his college and the doctrines it inculcates, or practice a gross fraud upon the community and the society with which he desires to connect himself

He further endeavors to show our similarity because we both 'are law abiding citizens," that "we meet each other in drawing-room, mart or amusement hall, to find no difference in courtesy, refinement or large-hearted charity" All of which does not substantiate our similarity as physicians, but is mere sentimental exuberance

He regrets "that a marked similarity exists between the ignorant and half-educated graduates of all kinds of medical colleges" In these regrets we most heartily agree He continues to demonstrate our similarity by giving a list of textbooks recommended officially, to be used in the Hahnemann Medical College, of Philadelphia, and that they are the same as those used by our own schools, showing clearly that the college training of our students is very similar, but the Doctor forgets to give us the textbook of the institutes of medicine

The teaching of this branch by Prof Dudley includes the relationship existing between the methods employed by the physician and surgeon and the objects sought to be obtained, in other words, the principles which determine and direct all therapeutics, whether preventive, palliative curative or reparative The major part of the course will be devoted to instruction in the principles of Hahnemann's *Organon*—with the scientific arguments upon which homeopathists base their acceptance of the Law of Similars, and the facts and statistics by which its efficacy and superiority are demonstrated" (*Forty-fifth annual announcement of the Hahnemann Medical College for 1892–1893*)

What the principles of Hahnemann's *Organon* are will be noticed hereafter

Again the Doctor says "A very striking similarity between us and our homeopathic neighbors is the latitude of opinion exercised in the choice and administration of drugs Many thoughtless persons believe that we give only large doses, homeopaths only small ones, that we do not use powders or triturates, that they do not write prescriptions or administer alcohol or opium Nothing is easier than to show the fallacy of these statements"

As to the choice and administration of drugs, there is no doubt as to the fact that the homeopaths use the same drugs that we do But here the similarity ends They doubtless use many drugs that we do and some that we do not, but they use them in such infinitesimal doses that the mind can not appreciate even by comparison their minuteness

To illustrate, let me quote a portion of the *Organon* "To serve the purposes of homeopathy the spirit like medicinal powers of crude substances are developed to an unparalleled degree by means of a process which was never attempted before, and which causes medicines to penetrate the organism and thus become more efficacious and remedial" 'It is applicable even to those substances which in their crude state do not evince the least medicinal effect upon the human body Thus two drops of the fresh vegetable juice mixed with an equal proportion of alcohol, and diluted with 98 drops of alcohol, and potentiated by two successions of the hand—this is the first development of power (potency) The same process is then to be repeated with 29 successive vials, each vial to contain 99 drops of alcohol, filling three quarters of the vial, this second vial is then to be shaken twice, and so on to the thirtieth development, this is the potentiated decillionfold dilution, and the one to be commonly used" (*Hahnemann's Organon*, page 178)

Dr Garrett in his work on 'Myths in Medicine" calculates the quantity of alcohol required to reduce one drop of crude juice to the sixth potency to be 1,356,336 large hogsheads of 120 gallons each

Imagine for a moment the quantity of alcohol required to reduce the same to the thirtieth potency!

In reducing powdered substances (I should say increasing "the spirit-like medicinal power of crude substances"), sugar of milk is used instead of alcohol, and it may be safely said that since the days of Hahnemann and if homeopathy should exist one thousand years hereafter not enough sugar of milk could be manufactured to reduce one entire grain of a crude drug to the thirtieth potency But you say this is an exaggeration Let me explain the first potency is made by taking one grain of any drug and adding thereto 99 grains of sugar of milk and after a number of triturations and successions we have the first potency, one grain of which contains the 1-100 of a grain of the crude drug, the second potency is made by taking one grain of the first potency and adding thereto 99 grains of sugar of milk (rejecting the remainder), and after triturating and shaking we have the second potency, one grain of which will contain the 1-10000 of a grain of the crude drug—by repeating the process, always taking one grain of the last potency until the thirtieth potency is reached, which is the one Hahnemann recommends to be most frequently employed, although some enthusiastic homeopaths continue the process to the two and three hundredths potency Hahnemann says in a note on the preparation of fluid medicines that "desirous of employing a certain rule for the development of powers of fluid medicine, I have been led by manifold experiences and accurate observations to prefer two instead of repeated strokes of succussion for each vial, since the latter tended to potentiate the medicine too highly" (*Organon*, page 221)

I have made an accurate calculation of the quantity of sugar of milk required to reduce one grain of any crude drug to the sixth potency, and find that it would require 701,423 tons, and that the actual quantity of the crude drug contained in the thirtieth potency is represented by this fraction 1 10000000000000000000000000000000000000000000000000000000000, whatever it may represent, and I must confess that my arithmetical knowledge is too limited to give it a name, and that my mind is too dull to form a conception of its minuteness I must not forget the similarity of the mode of administration of drugs, as that is one of the points mentioned by Dr Roberts

Hahnemann says "Homeopathic remedies will act with the greatest certainty and efficiency, particularly by smelling or inhaling them in the form of vapor emanating continually from a dry pellet impregnated with a highly rarefied medicinal solution and contained in a vial" The homeopathic physician should apply the mouth of the vial first to one nostril of the patient and request him to inhale the air from the vial, and if the dose is to be somewhat stronger, the vial should also be applied to the other nostril, the patient inhaling more or less vigorously in proportion to the intended strength of the dose, whereupon the vial should be replaced well corked in the pocket case to prevent abuse

Hence the physician may dispense entirely with the services of an apothecary if he chooses to do so Globules (of which ten, twenty or one hundred weigh a grain,) moistened with the thirtieth potentiated dilution and then dried, retain their full strength undiminished for at least eighteen or twenty years, (as far as my experience reaches,) even if the vial had been opened a thousand times, provided however, it had been well protected from heat and sunlight" (*Organon* page 224)

How similar this is to our mode of administration needs no explanation—that such refined nonsense should be seriously considered in this nineteenth century is one of the anomalies of this erratic age But this is not all of homeopathy, it is only the smallest part of the fallacy Hahnemann denies the existence of a 'materia morbi," and attributes all diseases to "spirit-like force (autocratic) which he calls "dynamis" "In sickness this spirit-like self acting (automatic) vital force omnipresent in the organism is alone primarily deranged by the dynamic influence of some morbific agency inimical to life" "Hence disease (not subject to the manual skill of surgery) considered by allopathists as a *material thing hidden within but distinct from the living whole, (the organism and its vital force) is a nonentity, however subtle it is thought to be*"

It could have originated only in the minds of materialists, and has for a thousand years imparted to medical science manifold deplorable directions stamping it as an unwholesome instead of a healing art" (*Organon* page 68)

Before proceeding to show the fallacy of this doctrine of spirit-like vital force or dynamis I will again quote from Hahnemann's *Organon* (page 154, sec 204) "By placing in one class all protracted diseases, arising from unwholesome habits of living, together with countless drug diseases produced by the persistent and debilitating treatment often employed by old school physicians in trifling disorders, we shall find that all other chronic diseases without exception, are derived from the development of three chronic miasms, internal syphilis, internal sycosis but chiefly and in far greater proportion internal psora Each of these must have pervaded the entire organism, and penetrated all its parts before the primary representative local symptoms peculiar to each miasm (itch eruption of psora, chancre and bubo of syphilis, and condyloid excrescence of sycosis) makes its appearance for the prevention of inner disease When its local symptoms are suppressed the internal disease will be developed sooner or later, in obedience to the laws of nature It will be followed by endless misery in the form of innumerable chronic diseases which have been the scourge of the human race for thousands of years, and these would never have prevailed to such an extent, had physicians endeavored rationally and zealously to cure and eradicate each miasm by internal homeopathic treatment and well selected medicines, instead of tampering with their local symptoms by topical applications"

I believe the itch insect was not discovered when Hahnemann invented his system it has since been demonstrated to be a very lively "spirit like force or dynamis," a very inveterate sort of "nonentity," a 'materia morbi" come to plague the homeopathists—what a terrific scratching among the faithful! and then 'the typhoid bacillus, the comma bacillus of cholera, the pneumococcus, the gonococcus and a host of other cocci's that have come to disturb the equanimity of the spirit-like homeopathic afflatus but then these are only spirit like nonentities, a sort of miasm' so to speak, to be cured, eradicated and stamped out by' smelling a homeopathic pellet about as large as a mustard seed more or less, moistened with the thirtieth potency of some anti-psoric, anti-sycotic or anti-syphilitic as the case may be But seriously what of the law of similars, the great concentrated principle of homeopathy, the "similia similibus curantur," the one great law of the system? and here let me remind you that this is the principal feature which makes us to differ, and which Dr Roberts believes to be of so little importance that we could easily coalesce, join the same medical society, meet each other in consultation, and take each other by the professional hand as brothers pursuing the same noble calling

This dogma is based upon the supposition that there are three sources of disease depending upon the existence of three miasms (syphilis, sycosis, and the itch,) and that they are antagonistic, that is if a syphilitic disease and apsoric disease exist at the same time in the body, that one or the other will be held in abeyance in the body until the one that has the precedence shall have expended its force, when the other will manifest itself, but if they should be similar, that is both psoric or both syphilitic, then the stronger will eradicate or cure the weaker, and thus effect a spontaneous cure—hence Hahnemann inferred that drugs prepared and administered homeopathically that are capable of producing symptoms in the healthy body similar to the symptoms of the disease, do eradicate the actual disease He says "Consequently experience leads to the undeniable conclusion that the living human organism is far more disposed and inclined to be affected, and to have its feelings altered by medicinal powers than by other noxious agencies and contagious miasms, or to express the same in other words *Extraneous, noxious agencies possess a subordinate and often extremely conditional power, but drug potencies possess an absolute unconditional power* far superior to the former in *ability* to produce ill health (morbid discordancy) of the human body (*Organon*, page 76, Sec 33) Again

'The greater intensity of artificial disease produced by drugs, does not constitute the only condition of their ability to cure natural diseases In order to perform a cure, it is necessary that drugs should possess the power of producing in the human body an artificial disease, *most similar to that which is to be cured*, for it is by virtue of its similarity combined with greater intensity, that the drug disease is substituted for the natural disease, thus depriving the latter of its power to affect the vital force This is true to such an extent, that even nature herself is unable to cure an older disease through the accession of a new *dissimilar* affection, even of greater intensity, nor can the physician perform a cure by means of drugs *incapable of producing in the organism a diseased condition similar to that which is to be cured* (*Organon*, page 76, Sec 34)

"All these examples prove that neither the efforts of nature nor the physician have ever been able to extinguish or cure a disease by means of a dissimilar morbific potency, however powerful, but they prove that according to eternal and irrevocable laws of nature which were hitherto misinterpreted, cures are made to result *alone from morbific potency which is similar in symptom and somewhat superior in strength* (*Organon*, page 88, Sec 48) Again he says ' The true homeopathic method of cure is the only correct, the only direct and the only possible means to be employed by human skill, as surely as it is possible to draw but one straight line between two given points" (*Organon*, page 92, Sec 54)

This is a very strong and positive assertion, but how does Hahnemann know of this certainty, of the potency of drugs—he tells us that it is proved by actual experiment upon the healthy human body—not by appreciable doses but by highly attenuated potencies or dilutions This is the last great fallacy of the system, and is best explained in Hahnemann's own words He says "Medicines should, therefore, be distinguished from each other with scrupulous accuracy, and proved by pure and careful experiments with regard to their powers and true effects upon the healthy body For upon the accuracy of this test (proving) depend life and death, sickness and health of human beings The test should be so conducted as to result in the acquisition of accurate knowledge of drugs, as well as to avoid every mistake in using them in diseases, for the unerring selection of remedies is the only condition for the speedy and permanent return of health of body and soul, the highest gift bestowed on man" (*Organon*, page 125, Sec 120) Again "The most recent experiments have taught that crude medicinal substances, if taken by an experimenter for the purpose of ascertaining their peculiar effect, will not disclose the same wealth of latent powers as when they are taken in a highly attenuated state, potentiated by means of trituration and succussion Through this simple process the powers hidden and dormant, as it were, in the crude drugs, are developed and called into activity in an incredible degree In this way the medicinal powers, even of substances hitherto considered inert, are most effectually developed by administering to the experimenter daily from four to six of the finest pellets of the thirtieth potentiated attenuation of one of these substances, the pellets having been previously moistened with a little water, should be taken on an empty stomach for several days" (*Organon*, page 127, Sec 128)

The only answer to this attenuated absurdity would be to pass it over in silence, were it not that (in the latter part of this nineteenth century) a professor occupying the chair of the institutes of medicine devotes the major part of his time to prove the efficacy and superiority of the Hahnemann method of treatment, and that we are asked by the president of the Philadelphia County Medical Society to lay aside our manhood and unite in consultation with the disciples of this finely spun moonshine

Let us examine the doctrines in the abstract—doctrines upon which the whole superstructure of homeopathy is built

1 Disease is caused by a spirit-like force, a dynamis

2 All diseases (not subject to surgical skill) arise from three miasms, namely syphilis, sycosis and the itch

3 These three miasms are antagonistic

4 That drugs properly potentiated are capable of causing similar diseases in the healthy human body to a greater extent and are always more powerful than this dynamis

5 That this power is proved by the administration of drugs (properly potentiated) to the healthy body

6 That this power possessed by drugs is capable of removing disease, when given in attenuated doses, by causing a similar but more powerful drug disease

This is the whole system of homeopathy expressed in a few words But we may abridge this system still further into two propositions, viz 1, that disease is a spirit-like force and not a materia morbi 2, that drugs possess (when properly attenuated and potentized) the power or spirit-like force to produce a similar drug disease, but always more powerful, thereby expelling the actual disease—that is, one evil spirit expelling another evil spirit—Satan casting out Satan But the good Book tells us that a house divided against itself can not stand, but must fall As already stated, the discovery of the itch insect and the many demonstrations of the bacteriologist effectually refute the first proposition, and as the second depends upon the first—in fact, all the propositions are dependent upon the spirit like force, both as a cause and a cure of disease,—nothing remains of homeopathy but the name, no sensible person can believe such fatuous extravagances

But Dr Roberts says that "If the action of homeopathic medical societies, of homeopathic medical journals, and the spoken and written statements of homeopathic physicians are examined, it is evident that very many of those whom the public regard as homeopathists have comparatively little faith in the infinitesimal doses of Hahnemann or in the infallibility or universality of his law"

I am fully aware of this fact, but it only proves the fraudulent practices of the homeopathists

Their pretended adherence to the homeopathic system—calling themselves homeopaths and at the same time using our medicines in the same appreciable doses and attributing their cures to homeopathy, is a gross fraud upon the community

No one objects to their practicing the system pure and simple—they well know that homeopathy would not exist to day if they would practice it as laid down by Hahnemann, although they use his *Organon* as a textbook and teach its principles as superior in their efficacy Hahnemann despised such physicians, who practiced both systems He says "Who would honor this careless and pernicious class with the name of homeopathic physicians after the salutory art? May their just rewards await them, that if ever sick they may be cured after their own fashion" (*Organon*, page 207)

Hahnemann was sincere, he believed our system to be pernicious and homeopathy the only possible method of cure, he denounced our method as wrong in toto

Almost every page of the *Organon* has dire allusions to the effects of the old school practice, which he alleges produces an incurable drug disease, and he expresses his gratitude to an all-wise Creator who has allowed homeopathy to be discovered Now, his pretended followers almost worship Hahnemann They build colleges and call them after his name, they rear monuments and statues to his memory everywhere, they sing loud praises of his virtues, they make his great work, the *Organon*, their textbook, then they fill their medical cases with every variety of old school drugs, practice our system under the cloak of Hahnemann, and thus impose on a credulous public Language is inadequate to express my contempt for such procedure "I had rather be a dog and bay the moon than such a Roman"

The president of the Philadelphia County Medical Society pleads for their reception in our medical societies, excuses their practice of the *similia similibus curantur* and their silly dilutions as so small a matter that we should embrace them as brothers Methinks I see the ghost of Hahnemann smile at the humiliating picture Dr Roberts quotes from homeopathic journals and homeopathic writers to show our similarity He says "This rather lengthy series of quotations from homeopathic writers has been made to establish my point, that we and most of them are for all practical purposes similar and at one They, as well as we, are free to choose whatsoever is thought to be the proper remedy for a diseased condition and to give it in whatsoever dose is considered curative" If such be the case, and we do not doubt it, let them abandon the name of homeopathy, practice rational medicine and show fruits meet for repentance Let them cease to oppose legislation and to demand a separate board of medical examiners If they are sincere and so near similar to us that Dr Roberts can see no difference, if, after practicing their silly nonsense for nearly a century, and by every subterfuge endeavoring to convince a credulous public that their method of treatment is the only true and positive method of cure, they are now beginning to see its folly, let them come to us in a legitimate manner by acknowledging their error and cease to teach their dogma of *similia similibus curantur* to their students We are not under obligations to them, nor will we 'crook the pregnant hinges of the knee where thrift may follow fawning" The gist of this matter is a paving the way toward a revision of the Code of Ethics, so as to allow a few specialists and those who hunger after the almighty dollar in the way of consultation fees to consult with homeopaths without violating the Code It behooves the profession to watch these men and not let them touch the Code by way of revision It is good enough for all, and its provisions prevent no one from pursuing a gentlemanly, true and honorable course

THE DISSIMILARITY BETWEEN PHYSICIANS AND HOMEOPATHISTS

A REPLY TO THE PRESIDENTIAL ADDRESS OF DR JOHN B ROBERTS

Read before the Philadelphia Medical Society, Oct 11, 1893

BY SOLOMON SOLIS-COHEN, M D

PROFESSOR OF CLINICAL MEDICINE AND APPLIED THERAPEUTICS IN THE PHILADELPHIA POLICLINIC ONE OF THE PHYSICIANS TO THE PHILADELPHIA HOSPITAL

This communication is presented at the request of a number of members of this Society who desire a record to be made of their dissent from some of the views advanced by Dr Roberts in his paper entitled, "Points of Resemblance Between Us and Homeopathic Physicians" The subject matter having been discussed by me at length in a paper read before the Society some years ago,[1] I may be pardoned for confining myself on the present occasion to a brief review of a few of Dr Robert's "Points" and to the introduction of but one counter-point

I have read somewhere an apologue which, slightly modified to suit the present occasion, runs thus

In the country of the Houhnhyms, concerning which land, its inhabitants and their customs, an interesting and reliable account has been left by the late learned and ingenious Gulliver, there was at one time an agitation in favor of what was termed "liberalization of the Constitution" In furtherance of this movement there was presented to one of the scientific societies, by an eminent and thoroughbred stallion, a very able paper entitled, "Points of Resemblance Between Us and Jackmules"

With the great generosity and candor which were its author's characteristics, this paper, while admitting that all mules were not alike, and that the earlier breeds had been quite obnoxious, yet claimed that in recent times a great change had taken place, that, indeed, mules were becoming every day less mulish, and it counted in favor 'of the great body of mules at the present time," even down to the least fraction of an inch by which their ears had been shortened, and the last hair in the little bunch at the end of their tails, every point wherein they had never so slightly departed from the anatomy of the more lowly line of their parentage, and approached to the form and features of the noble line that they shared with the speaker Many of the younger Houhnhyms were moved by his eloquence to respond to the generous impulses of the advocate of fraternization, and it appeared as if his views might prevail At this juncture a veteran "stud" arose, and with great gravity and deliberation spoke about as follows

"My noble friend has shown most clearly and convincingly that many Jackmules have done their best to imitate Us Let me even admit for argument's sake that he has succeeded in establishing many points of similarity But he must grant me permission to call attention to one point of difference There never was a mule yet but he was sired by a jackass"

Dr Roberts pays a handsome and well-deserved tribute to the personal and social qualities of educated homeopathists I can cordially indorse all that he has said upon this topic The question of scientific or ethical truth, however, is an impersonal one, and should be so considered The fact that Washington was a slaveholder did not make slaveholding right, and neither the high character of Dr Roberts, nor that of many members of the homeopathic fraternity can make white black or black white, make straight that which is crooked, or make crooked that which is straight

The question before us is one of simple honesty, and to decide it needs neither learned citation of authorities nor casuistical subtleties Either the name, "homeopathist," means something or it means nothing If it is meaningless there can be no legitimate reason for retaining it If it has a meaning it means separation from and opposition to progressive medical science, it means an assertion of belief in a certain well-defined dogma opposed to reason and to experience, an assertion, moreover, made for effect not upon medical colleagues, but upon the lay and uninstructed public It is only right, then to hold those who make use of that name to all the implications of the voluntarily assumed designation

A professed homeopathist can no more sever himself from the history of his sect than a mule can sever himself from the lineage of his sire Without jackasses, no mules, without continual Hahnemannian fecundation in each generation, no homeopathy

I agree fully with Dr Roberts, that neither "a physician's political religious, or social beliefs and affiliations, nor his opinion that in 'similars' he sometimes finds a remedy of value, should disqualify him" from membership in this Society But who has ever urged that any of these things should be disqualifications? That one's possible 'opinion that in "similars' he sometimes finds a remedy of value" does not act as a disqualification, Dr Roberts himself shows in the further course of his paper, quoting, moreover, the language of the American Medical Association 'neither is there any article or clause of the Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice'"

What Dr Roberts either fails to see, or refrains from commenting upon, is the fact that to hold the "opinion that in 'similars' one may sometimes find a remedy of value," is quite a different matter from labelling one's self "homeopathic" To believe that in electricity "one sometimes find a remedy of value," is not, therefore, to be an "electropathist," to use water as a therapeutic agent in suitable cases does not make one a "hydropathist" The difference is so obvious that to enlarge upon it would be to doubt the intelligence of the Society Equally great is the difference between one who sometimes uses a remedy that in healthy persons would produce effects resembling some of the symptoms of the disease, and one who assumes a title which, if it means anything, means that his everyday practice is designedly based upon the so called "law of similars" In words Dr Roberts ignores this difference, nevertheless he practically admits it, or there would have been no necessity to write his paper It does not require an elaborate thesis to demonstrate that twice two is four One needs not eloquently plead for the removal of a disqualification that he admits does *not exist*

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[1] Proceedings vol ix, p 278, 1889 The Medical News, Philadelphia, Oct 19, 1889

Dr Roberts is doubtless correct in his repeated assertions that "very many of those whom the public regard as homeopathists have comparatively little faith in the infinitesimal doses of Hahnemann, or in the infallibility or universality of his law," and that 'to day there is comparatively little belief in or practice of homeopathy as advocated by Hahnemann" A good lawyer would have hesitated to make such admissions in a paper written in defense of homeopathists They prove, however the sincerity of our former President, a proof strengthened when he further states that the real homeopathy pays no attention to the microscopic and chemic changes in tissues and organs, but believes in selecting a remedy which causes symptoms similar to the totality of the symptoms seen in the patient"

But if this belief, which Dr Roberts very properly characterizes as "unscientific and unworthy of credence," is in Dr Roberts' own language "the real homeopathy," what kind of homeopathy is that which he says is practised by the great body of those "whom the public regards as homeopathists?" It must be an unreal, a false, a fraudulent homeopathy And Dr Roberts's proposition reduced to plain English is this "We can not admit to membership in this Society the real homeopathists because they are loyal to a dogma which is unscientific and unworthy of credence, but we ought to admit the false homeopathists because they only pretend allegience to that dogma"

Mr President, I have more respect for the honest simple-minded donkey than I have for the disingenuous and uncertain mule

There is, however, one proposition in Dr Roberts' paper with which I desire to express my full and unqualified assent, and upon the principle enunciated in which we can all, I think, find a common meeting ground I, for one, should be most happy to aid in bringing about its incorporation into the organic law of this Society Dr Roberts says 'The test of qualification for membership should not be the college from which the applicant received his diploma, but an education enabling him to understand and appreciate the science of medicine and an honest purpose to treat his patients by all means and methods which experience, investigation and research show to be serviceable"

With this opinion, let me repeat, I am heartily in accord It is quite evident, however, that such an education as Dr Roberts describes can not be received in a sectarian school, despite the use of any number of scientific textbooks, and one has only to read the first homeopathic journal that comes to hand to see that even among the "unreal" homeopathists, while they do have considerable knowledge of the empiric practices of physicians, which practices they copy more or less intelligently—very few have an adequate comprehension of the principles of scientific medicine But the most certain evidence that the official representatives of homeopathy in Pennsylvania do not "understand and appreciate the science of medicine" has been given by their demand for the establishment of sectarian examining boards Any one who elects to go before such a board, thereby declaring his lack of acquaintance with scientific therapeutics and practice and the limitation of his studies to the theories and methods justly termed by Dr Roberts, "unscientific and unworthy of credence" voluntarily excludes himself from the ranks of the profession, voluntarily enrolls himself as a sectarian We certainly can not accept the certificate of such a board as evidence of an applicant's possession of "an education enabling him to understand and appreciate the science of medicine and an honest purpose to treat his patients by all means and methods which experience, investigation and research show to be serviceable" On the contrary, it is a direct evidence of partial and narrow education, of training limited to what Dr Roberts has well termed, "unscientific and untrustworthy" theories and practice If, however, a graduate of a sectarian college after sufficient practical experience to compensate for his want of school education, should desire to enter the ranks of the profession of medicine, and should evidence his sincerity, not ouly by abandoning his sectarian designation, but also by refusing to permit his patients to apply it to him, and if after due investigation the censors should report that he was in personal character, professional knowledge, and scientific spirit, worthy of admission to this Society, it would give me great pleasure to cast my vote in his favor

To conclude the great point of dissimilarity between physicians and latter-day homeopathists is the profession by the latter of adherence to a dogma which is not only "unscientific and unworthy of credence," and an insuperable obstacle to progress, but which they themselves do not half believe in, an "unreal" profession of faith which may serve to attract patients, but which can not be considered straightforward So long as any one voluntarily makes such profession he renders it impossible for self-respecting physicians to meet him upon equal terms

If, however, one whose personal character fits him for membership in this Society but who had formerly professed homeopathy becomes convinced of his mistake, and desires to join the ranks of scientific medicine, he should be freely received, provided only that he repudiates any sectarian designation and gives to the censors satisfactory evidence of his professional attainments More than this we ought not to ask Less than this we can not honorably accept

DOMESTIC CORRESPONDENCE

Hectic Fever

Austin, Tex, Oct 9, 1893

To the Editor —After many years of special experience in the treatment of pulmonary consumption and its various complications, I find the prescription herewith enclosed the most efficient and least disturbing to combat hectic fever

℞ Phenocoll
Salicin āā gr 48
Sulphate Hydrastiæ gr 24
M ft 24 capsules

Sig One capsule every four to eight hours, as may be necessary to cool or prevent hectic fever Of course, such other treatment, local or constitutional, as may be indicated should be diligently administered

Yours truly, Q C Smith, M D

Wayne County, Mich , Medical Society

Detroit, Mich , Oct 10, 1893

To the Editor —At the annual meeting of the Wayne County Medical Society the following officers were elected for the ensuing year President, Hal C Wyman, M D , Vice President, E B Smith, M D , Secretary, R H Horner, M D , Treasurer, C Henri Leonard, M D Board of Directors J E Clark, M D , E W Jenks, M D , James Newell, M D , J E Westgate, M D , K Gunsolus, M D

Yours truly, E B Smith, Sec'y

Diphtheria

Wisconsin State Board of Health,
Office of the Secretary
Appleton, Wis , Oct 6, 1893

To the Editor —Replying to your letter of inquiry the newspaper reports of the prevalence of diphtheria in Grantsburg, Wis , have been greatly exaggerated Official reports received at this office to October 5, show that there was probably an error of diagnosis of first cases, but since the true nature of the disease has been known it has been brought thoroughly under control

There has been a total of seven deaths to above date No new cases have been reported during the past week

Very truly yours, J T Reeve, Sec'y

BOOK NOTICES

A Manual of Medical Treatment or Clinical Therapeutics —By I Burney Yeo, M D, F R C P Professor of Therapeutics in King's College, London In two 12mo volumes containing 1,275 pages, with illustrations Complete work, cloth, $5 50 Philadelphia Lea Brothers & Co 1893

This excellent work will be found very useful to general practitioners Those fond of formulæ will find them here to their satisfaction and except that the author uses the English system of weights and measures and nomenclature no fault can be found with them In these days of International Societies, the tendency is to unite on the decimal system of weights and measures, but the Englishman is always satisfied with his 'right and tight little island," and its customs, and in the nineteenth century when every nation but his own has adopted a decimal money standard, he stands aghast at any proposition to change the relative value of his absurd division of money into pounds, shillings and pence, and is utterly unable to understand that among the labor saving devices of scientific literature the decimal system ranks as chief

The pathology of the diseases treated, although brief, is quite abreast of the latest literature on the subject, and the treatment recommended is unexceptionable We notice, however, the same tendency to the recommendation of European health resorts and mineral waters, in exclusion of every other, that characterize most continental books on therapeutics One may look in vain for a single reference to any American health resort, although the European resorts are very fully considered It would be unfair to change this against this particular work, because this fault is common to all of its class Why should an American, knowing the facts, recommend Nice in preference to Asheville or Los Angeles, or Carlsbad in preference to Hot Springs? The truth is, that in the matter of advertising our own mineral springs and healing resorts, we are not in the same class with the European In that favored land, advertising has become a fine art

We have wandered into these reflections, while examining this very valuable work of Dr Yeo, and can only express the hope that when the second American edition shall be provided, the just advantages of American resorts may have their place Notwithstanding the omissions pointed out, the work is deserving a place in the library and will be a welcome addition to the literature of medical therapeutics

The Theory and Practice of Medicine Prepared for Students and Practitioners By James T Whittaker, M D, LL D, Professor of the Theory and Practice of Medicine in the Medical College of Ohio, Lecturer on Clinical Medicine at the Good Samaritan Hospital, Fellow of the College of Physicians of Philadelphia, Member of the Association of American Physicians, of the American Academy of Medicine, and of the American Medical Association With a Chromo Lithographic Plate and three hundred Engravings Octavo, 840 pages, Extra muslin price, $5 75, leather, $6 50 New York William Wood & Company

It is customary for the unthinking to consider that surgery alone has profited by the wonderful discoveries of Pasteur, but a glance at the frontispiece of Dr Whittaker's book and at the text of the various articles will convince the most skeptical that this bacteriological epoch has revolutionized the practice of medicine not less than that of surgery

The author fully accepts the microbic theory as applied to general medicine He says in regard to malaria

'Malaria has for a long time been supposed to be caused by a '*contagium vivum* with no other positive proof however than the isolated experiments of Gerhardt of Berlin, who succeeded in producing the disease by injecting blood from the spleen of an affected individual into the veins of a healthy man All efforts to discover any demonstrable and acceptable cause of the disease remained futile up to the time of the investigations of Laveran 1881 a French military surgeon of Algiers who succeeded in discovering in the red blood corpuscles peculiar amœboid bodies endowed with characteristic protoplasmic motion, and containing granules of pigment matter Certain smaller bodies, of irregular, semi lunar or *crescentic outline are also found in the* blood plasma connected together often by fine thread These bodies are present in the blood of malaria in greatest abundance during a chill and disappear to a great extent after the attack Many of them are clear, more or less spherical, sometimes flagellated, hyaline masses undiscoverable without the use of dyes They gradually increase in size until they fill the body of the corpuscle during which process they undergo peculiar segmentation The intra corpuscular body receives the name, *plasmodium* Besides the plasmodium, flagellate structures with three to eight long active cilia, may be seen floating free in the blood of more acute cases or may be discovered in the blood drawn from the spleen, which is regarded as the hotbed of malaria in the body Golgi claims that the various types of fever, anomalies etc depend upon peculiarities or differences in these parasites, and Laveran maintains that the crescentic forms are found only in inveterate and cachectic cases So too, it is said that quinin destroys only the plasmodium, and that arsenic has more effect on the crescentic form Concentrated aqueous solutions of fuchsin and methylene blue are the best staining agents for ordinary diagnosis "

We have quoted this paragraph thus freely that it may be seen how far the old lines have been cast off

There is some lack of precision in the composition and a faultiness of style, for example "Diseases of the mouth for the most part reveal themselves readily to inspection Daylight is the best," etc, whether daylight is the best inspector, the best disease or the best revealer is uncertain, but here as elsewhere, the average reader knows what impression or idea the author means to convey The charm of the textbooks of Watson and of Flint lies in their clearness of expression and their precision, scarcely less than in their choice of words, the first two characteristics, the reader has a right to expect of all authors the last is a gift of the gods to the few, and is not essential

The work under review is without question the most original that has appeared on the subject for a long time, and the defects of composition that we have pointed out are so trifling in comparison with the great merit of the work, that we only mention them to insure their avoidance in the next edition, which we predict will speedily follow

New York County Medical Association Register of Members and Manual of Information 12mo cl pp 116 Published by the Association New York 1893

This is an official list of the members of the New York County Medical Association, and as well the names of "other practitioners of rational medicine resident in the City and County of New York

Unfortunately in the State of New York, and *there only*, the regular profession is divided, the meridian line being the American Medical Association and adherence thereto In the existing *division* the New York County Association adheres to the National organization, and thus cooperates with the profession as it is maintained in all the other States of our common country "

A history of the recent effort by the American Medical Association to restore harmony is briefly recited

Medical Society of the State of Washington —Transactions for 1893 This little volume records the proceedings of the Fourth Annual Meeting The papers are well written and show that our occidental brethren are quite up to the professional mark Dr G D Shearer of Tacoma, is the Secretary

Wisconsin State Medical Society Transactions —The annual volume of the Wisconsin State Medical Society lies on our table It is well printed and contains some excellent papers, many of which exhibit much painstaking, original work The Transactions compare favorably with those of other States Dr Chas S Sheldon of Madison, is Secretary

Syllabus of Lectures on the Practice of Surgery Arranged in conformity with the 'American Textbook of Surgery," by N Senn, M D, Ph D L L D Flexible covers, cl pp 221 Philadelphia W B Saunders 1894

This well-arranged syllabus of a system of lectures on surgery will be found very useful to teachers and students

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
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This is obtainable, at any time by a member of any State or local Medical Society which is entitled to send delegates to the Association All that is necessary is for the applicant to write to the Treasurer of the Association, Dr Richard J Dunglison, Lock Box 1274, Philadelphia, Pa, sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society with five dollars for annual dues and subscription for THE JOURNAL Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly

All members of the Association should send their Annual Dues to the Treasurer RICHARD J DUNGLISON M D Lock Box 1274 Philadelphia Pa

SATURDAY, OCTOBER 21, 1893

QUARANTINE IN CANADA

With reference to the World's Fair exhibit of the models of the disinfecting chambers in use at the St Lawrence quarantine the following will be of interest

Grosse Isle, about 700 acres in extent—larger than the grounds covered by the World's Fair—and thirty-one miles below Quebec, was purchased and equipped as a quarantine station in 1832, when cholera first visited this country It was then provided with the best means and methods for the ends in view at that time known There still remains a massive and roomy hot air disinfecting oven It had also a liberal supply of detention and isolation buildings, wash houses, etc The presence and use of these appliances and buildings provided all that sanitary science of that day considered requisite for a first class quarantine station during the sailing vessel period They rendered it then and for many subsequent years the best equipped quarantine in the world

The importance of this station will be appreciated when it is stated that in one season alone—the ship fever year, 1847—an immigration of more than 99,000 was dealt with there from May to September The hospital records for that time show an admission of over 8,000 sick A little monument in the cemetery bears witness to 5,424 interments in that short season alone

Following the change from sailing vessels to steamships, as immigrant carriers, and the advancements in sanitary science, the station has been equipped with all the requirements of modern maritime sanitation It has now three steam disinfecting chambers 25×8½×8½, double jacketed and fitted with steam gauges, vacuum pumps, electric contact thermometers, registering dials, etc, for the disinfection of clothing and luggage In connection with these are three sixty-horse power boilers for steam supply, with feed pump, settling tank, etc Above these chambers, in the second story, are twelve rain or needle baths for the personal washing of the suspected, while their clothes are passing through the steam chambers

A detention building has been erected to give saloon passengers the same accommodation as they have in a first class steamship Two buildings have been adapted with staterooms, baths, etc, for second cabin passengers, and the steerage buildings have had their wooden bunks replaced by galvanized iron beds There is for this class of passengers also an ample supply of baths and water closets These buildings, a mile and a half from the hospital division, provide for the detention and isolation of 128 saloon, 200 second cabin and 1,500 steerage passengers There is also a bacteriological laboratory Two powerful steam pumps supply water from the end of the pier to a 50,000-gallon reservoir from which it is piped to the buildings for all but drinking purposes An artesian well is being sunk for potable water, and there is a condensing and aerating apparatus in connection with the boilers calculated to yield a daily supply of 2,000 gallons The disinfecting steamer and the inspecting steamer are fully equipped with the most modern appliances, including steam hose, mercuric chlorid solution drenches, a sulphur dioxid blast furnace, etc

All vessels are inspected at Grosse Isle or, in the case of mail steamers, at the advance inspection station at Rimouski, 150 miles below, where the mails are landed If, upon inspection a vessel is found to be infected, it is dealt with at the Grosse Isle station, if found healthy it is allowed to proceed and land its immigrants at Quebec, or Levis opposite Quebec At these sub-stations *all* the immigrant luggage from healthy vessels passes through steam disinfection before it is allowed to be checked or forwarded More than one hundred thousand pieces of luggage from healthy vessels have been so disinfected already this season The plant for this purpose, at the Quebec landing place, is similar to that already described for Gross Isle, except there is one chamber instead of three

It may be added that Halifax, Nova Scotia, St John's, New Brunswick, William's Head, in the Straits of Fuca, and the Province of British Columbia on the Pacific coast, have been similarly equipped with all these recognized requirements, rendering them also quarantine stations of the first class

From the foregoing it will be seen that the utmost care is being taken by the Dominion of Canada to protect herself and her neighbors against the introduction of contagious diseases

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HOSPITAL GROUNDS TO BE BISECTED —The trustees of the Episcopal Hospital of Philadelphia are up in arms on a proposition to bisect the hospital grounds by the city extension of Fillmore Street

THE LIMITATION OF TUBERCULOSIS

In our last week's issue we published an account of the action of the Michigan State Board of Health, by which the physicians of that State are hereafter required to notify the local health officer of the existence of consumption and all other diseases due to the *bacillus tuberculosis*, the same as in cases of smallpox, scarlet fever or diphtheria The local health officer is to notify the State Board, and the State health officer will then give such instructions relative to restrictive measures, as the nature of the case and stage of the disease seems to warrant The Board has already issued a pamphlet perhaps generally applicable, showing how to restrict these cases

The great increase in the number of cases of tuberculosis throughout the country makes it desirable that some means of limiting the ravages of the disease be systematically undertaken, and if this move of the Michigan State Board shall prove beneficial, even in slight degree, the whole country will come into line

The cause of tuberculosis being well known, and its mode of transmission thoroughly understood, there is no longer reason why determined effort should not be made to stay the ravages of this dire affliction In consumptives, the care of the sputum, the mouth disinfection, the disinfection of all excreta, and the careful disinfection of the wearing apparel, are most valuable means of preventing the spread of the disease from the patient to others

Personal restriction is a harsh measure, and should only be required in very advanced cases, those, in other words, that are better off when kept quiet, but there is surely reason enough for requiring the sick man to keep away from crowded assemblages and public conveyances There is undoubtedly danger to the public health in allowing a patient with advanced phthisis to mingle freely with crowds, and contaminate the air with the products of expiration in public conveyances The expired air coming direct from the lungs, more or less charged with tubercle bacilli, is as fruitful a source of propagation of the disease as could well be imagined

It is not to be expected that the same limitation can be effected on other forms of tuberculosis, especially those of the bones and joints, and yet in many cases there comes a period in the history of these cases when there is generally disseminated tubercle, and often the same condition develops in the lung as in cases of primary lung infection

The success or failure of these efforts of limiting the spread of tuberculosis, happily begun by the Michigan Board of Health, can not be determined for at least a twelvemonth It is fortunate, however, that the system of registration in use in Michigan is so complete that we shall, soon after the year's trial, have definite and conclusive figures

CHILD LABOR CERTIFICATES

Many members of the medical profession are doubtless unaware of the enactment in Illinois of a very effective law, placing the duty of inspection of factories in which children are employed under a superintendent The law absolutely prohibits the employment in factories of children under fourteen years of age It provides that all children between fourteen and sixteen shall have a certificate, from an authorized physician, asserting that they are in such health and in such a state of development as to permit them in the judgment of the physician to work in the factories without danger This certificate must assert that the physician has examined the applicant and seen him at work, and that he considers him able to do the work proposed without detriment to his subsequent health In the operation of this law, children have brought to the inspector, certificates from physicians who have evidently made them in a perfunctory way, either entirely ignoring the condition of the applicant or having never seen him at work as the certificate requires It must be remembered that this law is intended to prevent the premature decay and the arrest of development of our young factory laborers, and it is intended in this way to diminish the subsequent expenditures of the State, the county and the city in the care and maintenance of the defective classes It is only necessary to invite attention to some of our more destructive trades, in which children are employed, to make apparent the wisdom of this provision Incidentally these requirements would keep the labor of children out of the market and prevent undue reduction of the wages of adults through the competition of child labor The physician, in examining the child, should thoroughly compare him with the well fed and well developed child of his age He should pay special attention to the development in those directions most apt to be arrested by the trade into which the child is going, and by the position in which he will be required to work The physician should do his work conscientiously, knowing that if he neglects his duty in this matter, the wreck of humanity which is likely to result, will have to be maintained in wretchedness at the expense of his own children when they come to manhood and womanhood and become taxpayers The physician should in no circumstances sign these certificates until he has actually seen the child at work in the factory for which the certificate is required

THE HEALTH OF AMERICAN WOMEN

Elsewhere in our columns PROF EDMUND ANDREWS gallantly defends our American women from the aspersions cast upon them by DR CYRUS EDSON who in a recent number of a monthly magazine held them up to popular condemnation for alleged physical deterioration and defective training

We doubt not that other defenders will break a lance in this fray under the leadership of PROF ANDREWS in case it shall be necessary, but at present it seems that as DR EDSON'S charges against American women were based on mere assertion, while PROF ANDREWS supports his opinion by figures, the latter has decidedly the better side of the question, and should receive the thanks of the women of America for his timely and prompt defense

ABSOLUTE ALCOHOL FOR SCIENTIFIC PURPOSES IS DUTY FREE

The decision of the United States Circuit Court, S D New York, *in re* Kny, rendered June 27, 1893, is just reported in 57 Federal Reporter, p 190, affirming the decision of the board of general appraisers, which reversed the classification of the collector of the port of New York on certain so-called "absolute alcohol" The latter classified it as "alcohol, 198 degrees, $4 95," at $2 50 per proof gallon, under the provisions of paragraphs 329 and 333 of Schedule H of the tariff act of October 1, 1890 Against this classification the importers protested, claiming that the article was a scientific preparation for college use, and duty free, under paragraph 677 of the free list of said tariff act This "absolute alcohol" was made by chemical action by adding lime, and then distilling the liquid over again, by means of which the high percentage of 99 5 of alcohol was obtained, and was from two to three times higher in price than the regular alcohol of commerce, running only to 95 per cent That it was "not intended for sale," within the meaning of said paragraph 677, was to be understood that it was not intended to be disposed of by sale to any other person than the corporation or society for whose special use the importation was permitted to be made, though in this case it was admitted that the importers' profit in furnishing the article to the colleges in question was about 20 per cent

RIGHT TO USE GEOGRAPHICAL NAMES FOR MINERAL WATERS

Whether a geographical name may become a trademark, when adopted as such, where its owner is the owner of the place of origin, and has the monopoly of the vendible product, is an open question But where a person alleges title to all the mineral springs situated in a certain place, and the exclusive right to the sale of the waters thereof, and that the name, as applied to said waters, has become of great value to him, and has always constituted an important and necessary incident and means to the sale of said waters, that such a name may be so used, and will be protected against infringement by other persons not obtaining their product from the same locality, is well settled So says the United States Circuit Court in the case of La Republique Francaise v Schultze, decided July 3, 1893, just now reported, 57 Fed Rep 37, where it holds that the word "Vichy," used in connection with mineral waters, and derived from the locality in France where the waters are obtained, is a trade name, or "nom commercial," within the meaning of the industrial property treaty with France of 1883, and as such is entitled to protection in the United States though it has not been deposited as required by the treaty in the case of trade-marks

TRY A NEW NAME

We suggest that some of the "Tri-State" societies *try* a new name to avoid triangular confusion We now have a Tri State Society of the brethren of Missouri, Iowa and Illinois, another of Indiana, Kentucky and Illinois, another of Arkansas, Tennessee and Mississippi, and another of Alabama, Tennessee and Georgia There is room in the AMERICAN MEDICAL ASSOCIATION for all of them, and all would be stronger if united in one great body The great need of the profession is organization, and medical men should join the parent medical Association on the broad ground of mutual scientific interests and material advancement The door is always open to members by application at any season We hope each member may aid the great movement now going on, which has for its object the formation of one of the most powerful medical associations of the time, in the AMERICAN MEDICAL ASSOCIATION

SOCIETY NEWS

Twenty-first Annual Meeting of the American Public Health Association in Conjunction with the International Congress of Public Health

Abstract of the Proceedings of the Joint Sessions of the Congress, held in Chicago, Ill, Oct 10, 11, 12, 13 and 14, 1893

OCTOBER 10—FIRST DAY—MORNING SESSION

The Congress convened in Hall Seven of the Memorial Art Palace, and was called to order by the President of the World's Congress Auxiliary, the Hon Charles C Bonney of Chicago, at 10 30 A M

Prayer was offered by the Rev Dr Parsons, after which addresses were delivered by Hon C C Bonney, Mrs Charles Henrotin, Dr A R Reynolds, Commissioner of Health of Chicago (representing the Mayor), Dr E Liceaga of Mexico, and Dr Sarah H Stevenson of Chicago

Mr Bonney then introduced Dr S H Durgin of Boston, President of the American Public Health Association, as President of the Congress, who replied briefly to the several addresses after which he delivered his Inaugural Address (See October 14th issue of THE JOURNAL, p 551)

After some announcements by Dr Brewer, the Congress adjourned until Wednesday morning

OCTOBER 11—SECOND DAY—MORNING SESSION

The Congress was called to order at 10 A M by the President

The first paper read was by DR ALBERT L GIHON, Medical Director U S N, entitled, "Sanitary and Medical Service on Emigrant Ships"

REPORT OF THE COMMITTEE ON RESTRICTION AND PREVENTION OF TUBERCULOSIS

This report was read by the Chairman of the Committee, Dr J N McCormack of Bowling Green, Kentucky The Committee offered as its report the following conclusions and recommendations

1 Tuberculosis has been conclusively demonstrated to be contagious, by bacteriological experiments, by clinical observations, and by a study of the history of the disease

2 Tuberculosis is a preventable disease Its preventability follows as a logical sequence upon its contagiousness, but has likewise been demonstrated in practical life

3 The contagium of tuberculosis resides entirely and solely in broken down tubercular tissue A person suffering from tuberculosis, therefore, does not become a source of danger to others until he begins to give off broken down tubercular tissue, either in the form of sputa from the throat or lungs, diarrheal discharges from the bowels, or matter from a tuberculous sore such as lupus, white swelling, cold abscess, scrofula or tubercular inflammation of a joint

4 A person suffering from tuberculosis can be made entirely harmless to those about him by thorough sterilization of all broken down tissue immediately upon its being given off With proper precautions it is therefore possible to live in the closest relation and upon the most intimate terms with consumptives without contracting the disease

5 Tuberculosis is not hereditary A predisposition to the disease can be transmitted from parent to offspring, but this is more true of tuberculosis than it is of all other contagious diseases

6 A predisposition to tuberculosis can be created anew by malnutrition or by anything which depresses the nervous system

7 Tuberculosis affects animals as well as man, and is identically the same disease in both In domestic life human beings and animals mutually infect each other

8 The media through which human beings are ordinarily infected by animals are milk and meat

9 Houses in which consumptives have lived and in which immediate sterilization of all broken down tissue has not been practiced, are infected houses and are liable to convey the disease to subsequent occupants

10 Spitting upon floors and into handkerchiefs, and permitting the broken down tissue to dry and become pulverized is a prolific cause of spreading tuberculosis

11 Temporary occupation of hotel rooms, sleeping car berths and steamer cabins by consumptives in the infectious stage can infect them so as to convey the disease to subsequent occupants, unless proper precautions are taken against contamination of the bedding, furniture and walls with broken down tubercular tissue

We recommend the following practical measures for the prevention of the disease

1 The notification and registration by health authorities of all cases of tuberculosis which have arrived at the infectious stage

2 The thorough disinfection of all houses in which tuberculosis has occurred, and the recording of such action in an open record

3 The establishment of special hospitals for the prevention of tuberculosis

4 The organization of societies for the prevention of tuberculosis

5 Government inspection of dairies and slaughter houses, and the extermination of tuberculosis among dairy cattle

6 Appropriate legislation against spitting into places where the sputum is liable to infect others, and against the sale or donation of objects which have been in use by consumptives unless they have been thoroughly disinfected

7 Compulsory disinfection of hotel rooms, sleeping car berths and steamer cabins which have been occupied by consumptives, before other persons are allowed to occupy them

The reports and recommendations of the Committee were adopted

TROPICAL DIARRHEA

This paper was contributed by Sir Joseph Fayrer of London England, and read by Dr Gihon

This is a form of disease which is generally, if not always, the result of tropical and climatic influences and the debility and cachexia induced thereby It is now not infrequently observed in Europe, owing to the ever increasing means of communication with foreign countries It is apparently generally confined to adults, is insidious in its onset, slow in progress, and often when not arrested sufficiently soon, fatal, owing to irreparable degenerative changes It has been described by many observers both English and foreign, in India, China, Cochin China and Batavia Most of the cases seen in this country come from India, China or Ceylon In India it is met with frequently, where a form of it is known as 'hill diarrhea," from its proneness to affect dwellers in hill stations, especially those who have previously lived in the plains, atmospheric changes, vicissitudes of temperature, greater altitude, rarefied atmosphere and possibly water being concerned in its causation Some authors consider it a distinct disease from the white flux which may be seen in any part of the country, but they are so much alike as to justify the belief in their identity, at all events for practical purposes Occasionally there is a resemblance to certain forms of chronic dysentery, the two conditions may be associated or one may merge into the other

Tropical diarrhea occasionally makes its appearance years after the subject of it has returned from the tropics It not infrequently begins without any previous apparent derangement of health, though it is sometimes preceded by dysentery, diarrhea, some indication of malarial infection or functional derangement of the liver or other abdominal viscera, and is not noticed until excessive soreness of the tongue and loss of strength and wasting reveal the gravity of the condition

Semeiology —This form of diarrhea may begin with simple looseness of the bowels, or may supervene on ordinary diarrhea or chronic dysentery The action produces a sense of relief The dejecta at first may be natural and bilious, but gradually become light colored, frothy, pultaceous and copious As the disease advances they are occasionally tinged with blood and the sufferer becomes more attenuated, exhausted and incapable of any prolonged exertion The appetite may be good, but rawness and tenderness of the mouth and tongue frequently accompanied by aphthous spots and ulcerations interfere with its gratification

Treatment —From the insidious character of the disease, tropical diarrhea not infrequently gains ground before radical measures for its relief are resorted to Successful issue depends much on the patient's resolution and perseverance in carrying out instructions Alternations of temperature, errors of diet, fatigue or excitement exertion, mental or physical, should be avoided Physiological rest should be insisted on

There is a tendency in the earlier stages to get well The object is to favor this tendency and not thwart it by neglect of precautions Diet is the most important consideration and must be strictly regulated and adhered to, and scarcely less important is the question of clothing, habits and modes of life Milk *alone* should be the only diet, and it must be given in small quantities often repeated, say from four to six ounces every hour, day and night Larger quantities at longer intervals will not do When in the twenty four hours an adult is able to take three to four quarts of cow's milk in this way ample nourishment is afforded to support his strength and to enable him to recover This method of treatment was begun by the author before his leaving India in 1872 After prolonged experience and trial of all other forms of remedy, he has found it more effective than anything It seldom fails except in the very advanced and chronic cases, or in very aged persons The conclusion arrived at is that though drugs are generally of little avail, if milk, taken as prescribed, does not succeed, there is but small chance that any other form of treatment will do so

CHOLERA INFANTUM AND ITS TREATMENT

By Dr Manuel Septien of Queretaro, Mexico

The treatment proposed is exceedingly efficacious It consists in the total suppression of all food and medicine during twenty-four or forty eight hours, and the prescription of pure cold water in great abundance The author said there is scarcely any disease that causes a greater mortality in childhood than that known by the name of estival diarrhea or infantile cholera In one single week the last one of July of the present year, there were 1,126 deaths in 33 of the largest cities of England, caused by this disease alone Statistics show everywhere a notable increase in the number of deaths during the months of June, July and August, that is to say, during the warmest season of the year The malady is not limited to children only, but attacks also a great number of adults and old people, being less mortiferous in the latter than in the former, in whom it causes a mortality of 50, 60, and even 80 per cent Only Asiatic cholera, to which it has the greatest similarity, can be compared to it for its ravages It is undoubtedly of microbic origin as recent investigations have shown

Energetic drainage is the supreme effort which nature executes to rid the organism of the deleterious elements that poison it To try to suppress it by therapeutical means is not an easy or rational thing to do It would only hinder the natural curative process The only thing that can be done is to oppose the extreme dehydration of the tissues by restoring to them without delay at least a part of the water lost This is the therapeutical indication, and no drug can take its place, nothing but pure cold water

All the curative methods tried leave much to be desired Their results are very uncertain, all consist in the administration of various medicinal substances, non astringents, absorbents, antiseptics or anti-peristaltics, and in the prescription of some alimental regimen Such treatments, according to the author, are not in conformity with the great principle that governs therapeutics, namely *the physiological rest of the organ that suffers*

The author had practiced successfully the treatment recommended by Luton of Reims He summarized the points of his paper as follows 1, to suppress all nourishment and medicine for one or two days, 2, to give at discretion pure cold water, 3, to return by degrees to a rational regimen

ORIGIN AND DISSEMINATION OF TYPHOID FEVER

By **Professor W T Sedgwick** of Boston Professor Sedgwick's remarks on this subject were impromptu He first dwelt upon the reorganization of the State Board of Health in Massachusetts in 1886, shortly after which an experiment station was established at Lawrence for the purpose of studying typhoid fever chemically and bacteriologically, and looking to the purification of the water In 1890 an epidemic of typhoid fever broke out upon the Merrimac River in the city of Lowell, and shortly afterwards appeared at Lawrence, nine miles below These epidemics afforded unusual opportunities for the investigation of the epidemiology of typhoid fever

SECOND DAY—AFTERNOON SESSION

Mr Allen Hazen of Lawrence, Mass, read a paper entitled

THE SEWAGE DISPOSAL PROBLEM IN AMERICAN CITIES

He said one of the striking features of the sanitary development of American cities is the very rapidly increasing number of places which for one reason or another are treating in some way their sewage It is not so many years since there was hardly a sewage purification plant in the United States, while at the present time there are some thirty municipalities in a dozen different States which give their sewage a more or less thorough treatment Of these a number are in the far West where the sewage has a commercial value for irrigation which has probably been considered quite as important as the sanitary advantages secured by the treatment, but the greater number are in the East, where a dense population and increasing desire for cleanliness in the waters of streams and lakes, and particularly in water supplies, has brought to an issue problems which as yet have scarcely received the attention of the inhabitants of the less thoroughly settled States

There are two sewage problems which are entirely different in their nature, although the same remedies may often be applied to both There is first the pollution of rivers and lakes to such an extent that they produce a nuisance to the people who live upon their banks, and secondly the pollution of water supplies by sewage The first case is often that of a city upon the banks of a small river which becomes so reduced in volume in dry weather that the sewage may fairly be said to be the predominating element in its composition Up to a certain point, rivers are capable of taking sewage without causing a serious nuisance to the people who live upon their banks, so long as they do not drink from them, but when this quantity has passed, deposits are formed, decomposition sets in, and the stream is rendered foul in appearance and objectionable in its odor The exact quantity of sewage which can be mixed with water without causing a nuisance varies with local conditions and can only be approximately estimated, but as long as the limit is not passed, and the bodies of water not used for drinking, the disposal of sewage by turning it into such water is entirely unobjectionable and by far the most satisfactory method possible

Where the sewage of a town is entering the public water supply of a neighboring town, or worse yet, its own supply, the problem is entirely different The removal of the organic matters of the sewage becomes of secondary, although still an important matter, while the removal of those germs of disease, which would otherwise work such mischief among the consumers of water becomes the one important point

The author then dwelt upon the possibility of sewage treatment by chemical precipitation, which he said was the same the world over Local conditions are only of secondary importance The experiments undertaken by the Massachusetts State Board of Health at the Lawrence Experiment Station, some six years ago, indicated that the local conditions in Massachusetts would allow the treatment of sewage upon land even with more favorable results, both as to quantity of sewage treated and quality of effluent obtained, than had been supposed to be the case from a study of European practice

It is impossible, by any combination of chemicals, to secure the purification which approaches even remotely the result obtained by land treatment, but when the problem is simply to keep the water into which the sewage flows reasonably clean, the result with careful manipulation is quite satisfactory When, however, the treated sewage finds its way into the source of the public water supply, the effluent produced by even the most complete chemical precipitation can not be regarded as an entirely unobjectionable addition, and such water should be further treated by filtration before use

THE COLLECTION AND DISPOSITION OF ANIMAL AND VEGETABLE WASTE IN THE CITY OF MILWAUKEE

By **Dr U O B Wingate**, Commissioner of Health of Milwaukee As early as 1879 the city of Milwaukee began to grapple with the garbage problem, and it has been a long and serious struggle until a recent date In the winter of 1891 and 1892, the State Legislature passed an act authorizing the Common Council of the city to enter into a contract for the disposition of garbage, with the advice of the Mayor and the Commissioner of Health It was decided to let the contract for five years to a company who would build a plant fourteen miles out of the city, collect and remove to said plant all garbage, offal, dead animals, both great and small, and animal matter of the city of Milwaukee, including refuse matter from the commissson houses, etc, to said plant in which they would dispose of it in a sanitary manner This contract went into effect and the work was commenced in June, 1892

The Company constructed a plant at an expense of some $110,000 They purchased a powerful steam barge for transportation, they put on fifty steel, air tight wagon tanks for collection and two large covered wagons for the collection of large dead animals Since the first of September, 1892, the plant has been in operation to the satisfaction of the city officials of Milwaukee, creating no nuisance or stench whatever that can be reasonably objected to in its location, and the collection and transportation of the material during that time has been fairly satisfactory

DISPOSAL OF GARBAGE AND WASTE OF WORLD'S COLUMBIAN EXPOSITION

By **Col W F Morse** of New York Since the meeting of the American Public Health Association two years since, marked progress has been made in the destruction of garbage and waste of cities by fire Six years' experience has shown this method to be of far greater value than any other, and improvements in furnaces and reduction in cost of operation have steadily made it more popular and useful

England has now furnaces in every large city and the number is yearly increasing This country is awakening to the value of this method, and it has been inspected and recommended at a great number of places The most striking and effective work done in the world is at the World's Fair where two furnaces of the Engle Sanitary Company have been at work since the first of May It was early seen that the sanitation of the Fair, the care of the health of the great multitudes resident and who would come as temporary guests, would demand the best, and only those which had been thoroughly tested, methods of providing for the drainage, and the collection and disposal of the great mass of daily accumalating garbage and organic waste After the drainage was arranged the question of sewerage disposal and garbage destruction came up A contract was made with the Engle Sanitary Company of Des Moines ard New York, for two garbage cremators to burn 100 tons of sewerage sludge, garbage and stable refuse These two furnaces were built in the fall and at the opening of the fair were ready for work They are in the extreme southeastern part of the grounds, near the Forestry Building, back of the power house of the Intramural Railroad, employing the well-known device of the Engle Company, two fires, one at either end the one burning the mass of garbage on the grates, the other destroying-the smoke, and all results of this combustion These furnaces have been in constant work every day since May 5

The garbage is brought at night from 11 P M to 8 A M, and placed at once in the furnaces From twenty-five to forty loads each of one ton having sometimes ashes or water in large amounts mixed therewith Everything goes into the furnaces—four horses, two camels, cows, deer, elk, pigs, goats, dogs etc, all follow the same road and are burned with equal ease No results can be seen from the chimney A thin, invisible, carbonic acid gas, discharged at a temperature of 1,000 degrees is all that results No smoke, no odors, nothing that can be offensive is detected Though in daily use an observer would not know any work was done, unless he came to the building At 10 A M the loads of sewerage cake begin to come This is a thick, heavy, soggy mass of lime, fecal matter, paper pulp, etc, with 60 per cent of water mixed The quantity varies from ten to eighteen or twenty-five tons, and is the most refractory material to burn yet found The fires are oil fed by jets of air a pressure of twelve ounces of air doing the same work that is done in the boiler house with 120 pounds of steam The ashes are used by Exposition people for filling low places, though they have a value of $10 per ton for fertilizers

There are six burners spraying oil, the whole using thirty-seven and one-half gallons per hour The cost for fuel and labor is from 75 to 80 cents per ton for sewerage sludge and 50 to 70 cents for garbage

At other places where these same furnaces are used, the cost is reduced by bringing to the furnace, the paper sweepings, and all kinds of city combustionable waste which makes fuel to burn wet matter and reduces the cost of from 12 to 15 cents per cubic yard or 30 to 40 cents per ton Official reports from Savannah were read showing the cost for last eight months to be 11 cents per cubic yard

The work has been continuous, no stoppage, no nuisance, performed under observation of thousands of persons, inspected by many interested in this work from abroad, and has met with deserved credit and favor from the Board of Administration By adoption of similar furnaces at four points in Chicago the whole garbage nuisance could be abolished, the same work done for the city that is here performed at a reduced cost and the vexed problem of garbage disposal settled and got rid of once for all This is no theory or experiment This company was asked to do this work because they had demonstrated elsewhere their ability There are forty furnaces, or more, built by the Engle Company and in successful operation, more than twenty times as many as have been built by others, but this is the most successful instance of the destruction of garbage on a large scale that has been seen in this country

HOW CAN WOMEN PROMOTE PUBLIC SANITATION?

By Dr Sarah H Brayton of Evanston, Ill She said as instructors in hygiene, nurses have a wider scope for sanitary reform than physicians, living as they do with the families they attend, their opportunity for the diffusion of knowledge is greater Undoubtedly there is much that women could do on health boards, there is more that they must do among their own sex to increase the sum of sanitary knowledge among all classes and promote intelligent cooperation with health authorities, whoever they may be

THE PROGRESS OF SANITARY KNOWLEDGE AMONG THE WOMEN OF ENGLAND

This was the title of a paper contributed by Lady Priestley of England, and was read by Mrs Henry Wade Rogers of Evanston The author of the paper went back twenty years when she first joined the Executive Committee of the National Health Society, and attended the meetings in a small, dingy, draughty room in a house about as unsanitary as any to be found in London, and traced the progress made in sanitary science from that time to the present The author would impress upon all mothers, and those who are responsible for the welfare of others, the desirability of giving personal care and forethought, which alone can avert the consequences of unsanitary surroundings

NOTES ON CHOLERA AND ITS MANAGEMENT IN HULL, ENGLAND

This was the title of a paper contributed by Dr John Wright Mason, Medical Officer of Health in Hull, but was read by Dr Charles N Hewitt of Minnesota, in the absence of the author

The first epidemic of cholera occurred in 1832, but the total number of deaths from the disease did not exceed 270 On the 10th of August, 1849, the great visitation of the disease commenced The total number of cholera and diarrhea victims during the invasion was 1,860, being one in forty-three of the whole population of 11,000 Six hundred persons died from cholera alone, in one week in September The average age of the victims was from 30 to 36 years of age Of the total number of deaths recorded, 1,738 belonged to the laboring classes and 122 to the wealthy The greatest mortality occurred in those parts of the town where the levels were the lowest, and in which the unsanitary surroundings were the most noticeable It is recorded by an eminent minister that on one day—Black Sunday—he himself interred no less than forty three bodies of his fellow citizens The water supply was at that time obtained from the stone ferry waterworks, situated one and a half miles from Hull and two and a half miles from the mouth of the river, the water being obtained from the River Hull, the widespread character of the epidemic being greatly attributed to the impurity of the river water Since 1849, Hull has increased both in wealth and population, and its area has been considerably extended The number of emigrants passing through the port en route for America has averaged between 50,000 and 60,000 yearly during the past ten years The infectious diseases (notification) act, 1889, has been applied to the port as well as to the urban authority Measles was included among the notifiable diseases on the 10th of February, 1893

Cholera follows the line of international communication, and with the modern increased facilities for rapidity of transit, so is the danger of its possible invasion increased by emigration or otherwise England does not depend upon the false security of quarantine but rather upon its sanitary administrations, and each district should be in such a state of sanitary preparedness that the disease if imported should not spread The experience of 1892, during the epidemic at Hamburg, in those ports which were exposed, and possibly none more so than the port of Hull, which was in daily communication with that cholera stricken city, must have inspired confidence in the public mind in this country and the continent of Europe, that medical inspection, the due regard for the rigorous inspection of all articles likely to convey infection, improved sanitation and efficient hospital equipment were alone sufficient to arrest the progress of the disease Our first line of defense against the introduction of cholera consists of the medical inspection upon arrival both by day and night, of all vessels from cholera infected or suspected ports, and should cholera have developed during the voyage among any of the passengers or crew, the removal of the patients to hospital, the isolation of suspected cases and the detention on board the vessel of such persons who may be in a filthy or otherwise unwholesome condition, and who can not satisfy the medical officer of health as to their place of destination

The second line of defense against the possible introduction of cholera, or other diseases should be well protected, and the early preparations against the means by which such diseases if imported, spread, should be studied, thought out and perfected in the interim, and not during epidemic prevalence and excitement Special attention should be directed towards a pure and unpolluted water supply, the periodical and regular removal of all excreta and refuse matters in the midst of populations, the frequent flushing of all drains and sewers, the prevention of overcrowding, the systematic inspection of common lodging houses, and lastly but not least, our food supplies

Hull is essentially a privy town The death rate of Hull from all causes for the ten years, 1882 to 1891, averaged 20 7 per thousand The death rate from fevers during the same period was equal to 1 26 per thousand, and for diarrhea alone 1 10 per thousand

The author then dwelt upon the management of cholera The precautions which are adopted in Hull of what has been described as "the movement of a sanitary column," as follows

Immediately upon the receipt of a notification of cholera, or of sudden illness of a choleraic character, either by the medical practitioner in attendance, the sanitary inspectors or the police, the medical officer of health is communicated with and immediately visits the case, or in his absence his assistant Should the case admit of removal the horse ambulance, fully equipped with trained men in attendance is immediately requisitioned by telephone The assistant inspector of nuisances for the district in which the case occurs is forthwith acquainted, and makes his appearance with a column comprising flushers, lime washers and disinfecting staff He superintends the removal of the inmates of the house to the hospital for the purpose of bathing, and the disinfection of their clothing, the disinfection of the house, together with all articles of bedding, clothing, etc, which have been exposed to infection, and the destruction of such articles as may be ordered by the medical officer of health or his assistant The contents of the privy are removed to the destructor for cremation and the interior cleansed, disinfected and lime washed The subsidiary drains in the immediate contiguity of the house are thoroughly flushed, and disinfectants are freely distributed in the neighborhood of the outbreak

EVENING SESSION

At this session Dr George M Sternberg, Surgeon General of the United States Army, delivered a stereopticon lecture on "Pathogenic Bacteria" Slides of the typhoid bacillus, the bacillus of anthrax of tuberculosis, of glanders, of tetanus, of influenza, of hog cholera, etc, were shown

OCTOBER 12—THIRD DAY—MORNING SESSION

The first paper read was by Dr D E Salmon, Chief of the Bureau of Animal Industry, entitled,

TUBERCULOSIS AND THE FOOD SUPPLY

The author assumed without argument, as already established by scientific investigation, that tuberculosis is a parasitic disease, that it is caused by the multiplication of a specific microorganism in the tissues of the animal body and by no other means Of the two methods by which the disease is contracted, with man as well as with animals, it may be admitted that the most frequent and therefore the most important is the inhalation of the microorganisms suspended in the inspired air The speaker had no means of estimating the proportion of cases of tuberculosis which arise from infected food, but he was prepared to admit that tuberculosis of the abdominal organs and tubercular meningitis, particularly of children, were generally caused in this way The author then considered infection through the milk supply and infection through the meat supply Tuberculosis is one of the most common diseases of milch cows It exists in many dairies, and may affect 50, 75 or 100 per cent of the animals in large herds We do not know the average proportion of cows affected in this country, but in the dairies around our large cities from 3 to 5 per cent have been affected when the diagnosis was made by the ordinary methods of examination In the United States we have no statistics of the results of the tuberculin test, except with herds known to be tuberculous Fortunately the milk from all tuberculous cows does not contain the bacilli When there are tubercles in the udder, however, the milk may contain immense numbers of these germs, and this is particularly the case if the tubercular mass softens and its contents escape into the milk ducts The milk from cows so affected must be considered an extremely dangerous article of food

The prevalence of tuberculosis in dairy cows can be lessened, and the danger from infected milk diminished, by a careful and periodical inspection of the herds from which the milk supply is obtained This inspection must consist not only of a physical examination, but must also include the tuberculin test There must in addition be some means provided for securing the destruction of animals found to be tuberculous

SYPHILITIC INFECTION AS A VEHICLE OF THE COMMUNICATION OF TUBERCULOSIS

By Dr Manuel Carmona y Valle of Mexico The author of this paper cited the history of a case demonstrating the possible association of the syphilitic virus with the pathogenic agent of tuberculosis and the possibility of transmission not only of the syphilis but of the tuberculosis also He had found in the ulceration of the throat both characters

THE INFLUENCE OF HABITATIONS IN THE PROPAGATION OF TUBERCULOSIS

By Dr Manuel Gutierrez of Mexico Pulmonary tuberculosis is more frequently observed in the United States than in the Republic of Mexico The statistical records give a proportion of from 118 to 120 per thousand in America while in sunny Mexico it does not reach the number of 60 to every thousand One of the causes which contribute to produce so notable a difference in the propagation of so dangerous a disease, is the difference of the elevation in both countries, because we know that dry air is not a vehicle for the multiplication and generation of the bacillus of Koch, and the relative rarefaction of the air is in a direct ratio to the elevation Mexico being 2,257 meters above the sea level, it is consequently not difficult to explain its superiority in arresting the conditions favorable to the propagation of a disease which undermines so many constitutions

The author's attention has been called to the fact that not only in the hotels, and public establishments, but also in private dwellings in the United States, there are rooms constantly illuminated with artificial light and in which the light of the sun never penetrates The individuals who work therein are deprived for many hours of the beneficial action on the economy that we know solar light exerts, and we know that these privations and the special conditions that accompany it can contribute to the development of tuberculosis by producing 1 the anemia and its consequent state of malnutrition, preparing the ground that serves for the cultivation of the germs of the disease, 2, increasing considerably the temperature of the place illuminated, constitutes also a propitious cause of multiplication of the pathogenic principles involved and in the tubercular process

PROPHYLACTIC AND THERAPEUTIC VALUE OF FOOD

This paper was contributed by Mrs Ellen H Richards of Boston She said the prophylactic value of food is to keep the human body in a high condition of health The main object to be gained is to establish a higher standard of health in the community, to make as widely known as possible the fact that most of the ill health now prevalent is needless, that a little self-denial, a little more attention to the rules of hygiene, a little more living in the open air would cause a large number of the diseases now so common to disappear

HYGIENE OF HAIR DRESSING AND BARBER SHOPS

By Dr Angel Contreras, Pueblo, Mexico The disease which persons are most liable to contract in barber shops is scurf, and the author therefore touched on what appeared to him the most important points in the consideration of this matter Scurf is understood to be a disease of the capillary system caused by the presence of vegetable parasites The disease can be transmitted by some animals which already have it, but the contagion most commonly takes place from person to person, and in families in educational establishments and in barracks, the disease assumes an endemic character Several times the center of this propagation has been found in a hair dresser's or barber's shop, and has arisen from the use of instruments which have been badly cleansed Barbers and hairdressers ought therefore to be very careful in cleansing the utensils which have served for one person before they are employed on another All the utensils should be subjected to the action of heat for a space of ten minutes, in a vessel or receptacle at a temperature of 120 degrees, and the razors in an oil bath

THE WATER SUPPLY OF CHICAGO, ITS SOURCES AND SANITARY ASPECTS

By Arthur R Reynolds, M D, Commissioner of Health of Chicago, and Mr Allen Hazen The extensions of the various tunnels within the last two years have undoubtedly secured for the city a water less liable to sewerage pollution than was formerly obtained The available analyses of the water are perhaps inadequate to measure accurately the improvement but fortunately we can apply that most satisfactory of all tests, the typhoid fever death rate The improvements in the water intakes have not all been made at a single date, but if we compare the two years ending September, 1892, and Sept 30, 1893, we find that during the earlier years the shore intakes at Lake View and Chicago Avenue were in common use while the four mile tunnel was not yet opened, while for the greater part of the latter year the shore inlets were entirely closed and the four mile tunnel and the one mile tunnel at Lake View were in use For the year ending Sept 30, 1892, the number of deaths from typhoid fever in Chicago was 1,790 in a total of 26,646, or a percentage of 6 72 For the year ending Sept 30, 1893, the deaths from typhoid fever were 712 in a total of 26,977, or a percentage of 2 64 It is most unfortunate for this comparison that the old supplies were partly in use during the first four months of the latter year, before the four mile tunnel was opened We may believe that if this had not been the case the comparison would have been still more favorable to the improved supply

It is a well-known fact that people using a water supply to which they are not accustomed are often more susceptible to any infection which it may contain than are those using such water regularly A striking illustration was furnished by Philadelphia in the Centennial year, when the typhoid death rate was nearly doubled, while in Chicago the present year for the first five months of the Fair period the rate has been less than half as high as for the corresponding months of the preceding year, and for the entire year under consideration, in spite of the vast numbers of visitors continually present, there has been a reduction of over 60 per cent in the typhoid fever death rate This reduction is most striking, and it can hardly be doubted that the improvements in the water supply have been the chief, if not the only cause As there is no marked local distribution of the typhoid fever, so there were no exceptions to the general improvement with better water supply Not a single ward but showed a substantial reduction Stronger evidence could hardly be produced to show the causal relation between the contamination of the water supply and typhoid fever The mortality percentages from typhoid fever in a number of cities may be compared as follows Chicago, 1892, 6 72, in 1893, 2 64, Philadelphia, 1892, 2 22, Boston, 1 22, Paris, 1 01, New York, 90, Brooklyn, 80, London, 49, Berlin, 42 The cities having the lowest typhoid fever death rate, London and Berlin, use only filtered water London draws nearly all of its water from the two grossly polluted rivers the Thames and the Lea and, after filtering it, applies it to a population that is almost free from typhoid fever It may be a question worthy of consideration by the engineers whether filtration would not be as cheap and effective a means of improving the water supply as the farther extension of the tunnels

REMOVAL OF PATHOGENIC BACTERIA FROM DRINKING WATER BY SAND INFILTRATION

This paper was read by Mr George W Fuller of Lawrence, Mass That drinking water is a carrier of some diseases there can be no doubt Numerous laboratory experiments by many investigators indicate that the bacteria generally attributed to be the specific organism of typhoid fever, Asiatic cholera and other diseases live in ordinary drinking water for many days The results of long-continued investigations at the Lawrence Experiment Station, show that the typhoid bacillus is able to live in the water of the Merrimac River, in greatly diminished numbers, for a period of at least twenty four days Other investigators using different water and different conditions, estimate the length of life of this germ at from three to eighty days The duration of life of the cholera spirillum in various waters has been observed to be from two days to seven months Modern hygiene demands that drinking water shall be free from pathogenic bacteria, and the means by which such water can be obtained are worthy of our most careful consideration

During the past forty years many filter plants have been constructed in Europe and numerous experiments in the filtration of water have been made, particularly during the past decade This is largely due to the aid of bacteriology which enables us to determine the actual efficiency of filters with regard to the removal of bacteria The operation of many filters is quite satisfactory, as is shown by the low death ratio from these diseases, conveyed by drinking water and by the results of numerous bacterial analyses

In summing up our present knowledge upon the removal of pathogenic bacteria from drinking water, we may state that in addition to the experience of certain European cities, the Lawrence investigations covering a period of more than five years, and including the bacterial examination of more than eleven thousand samples of water indicate that it is entirely practicable to construct filters that will economically purify water and remove more than 99 per cent of bacteria which may be present in the unfiltered water

"The Potable Waters of the Country Presenting Many Dangers" This paper was read by Dr Thomas Noriega of Mexico "Statement of Scientific and Experimental Data for the Establishment of International Maritime Police," was read by Dr E Liceaga of Mexico Dr Domingo Orvanaños of Mexico, read a paper entitled, "Difficulties in the Practice of Quarantine in Some of the Mexican Ports" Other papers were read as follows on this subject "The Canadian Quarantine System" by Dr Frederick Montizambert of Quebec, Canada, "Quarantine System of Texas," by Dr R M Swearingen of Texas, and "Quarantine," by Dr S B Olliphant, President of the Louisiana State Board of Health

Evening Session

At this session, addresses were delivered by Dr Sarah Hackett Stevenson of Chicago, on "Municipal Sanitation," by Miss Ada Sweet of Chicago, on "Voluntary Health and Public Improvement Societies," a paper by Sir Charles Cameron of Dublin, on "Importance of Civic Public Hygiene to the State," "Municipal Sanitation of Minneapolis," by Dr E S Kelly, of Minneapolis, and "The Importance of Sanitary Bureaus, Their Economic Organization," by Dr Jesus E Monjaras, Sanitary Inspector of San Luis Potosi, Mexico

October 13—Fourth Day—Morning Session

Papers were read at this session as follows "The Best Way to Restore the Practice of Vaccination to Its Proper Place as a Preventive of Smallpox," by Dr Charles N Hewitt, Secretary of the Minnesota State Board of Health, "Animal Vaccine Why It Should be Preferred to Human Vaccine" by Dr Miguel Marques of Chihuahua, Mexico; "La Grippe," by Dr Gregorio Mendizabal of Mexico, "Diphtheria in the City of Mexico," by Dr Roque Macouzer of Mexico, "Notes on Scarlet Fever in the City of Mexico," by Dr Francisco Marin of Pueblo, Mexico, and "Unrest," by Dr William Oldright of Toronto

AN EXPERIMENT IN DISINFECTION—HOW AN EPIDEMIC OF PNEUMONIA WAS CHECKED

This was the title of a paper read by Dr Jerome Cochran of Montgomery, Ala The paper dealt with an epidemic of pneumonia checked by disinfection The total number of cases during the epidemic was ninety-three, total number of deaths thirty, nearly one third of the cases The epidemic occurred in the prison at Pratt Mines, Alabama. The prison was divided into three sections, and while the disinfection was going on in one section the convicts belonging to that section were crowded into the other two sections The mattresses were taken off, and these together with the blankets were scattered over the floor Then by means of a force pump and a long hose pipe the ceilings, walls and the floors with their contents were literally deluged with a solution of bichlorid of mercury, 1-1000, until the bichlorid solution stood in puddles and ran in rivulets on the floors The mattresses were turned over so as to be wetted as thoroughly as possible on both sides Dr Cochran has more confidence in the disinfecting power of heat than in the bichlorid The mattresses, blankets, etc, were therefore put into large steam chambers that had been constructed for the purpose and kept there for six hours, after which they were taken out and dried In the meantime the disinfected wards were thoroughly scrubbed out whitewashed and fitted up so that they could be occupied again the next day The convicts, before they were returned to their old quarters, were required to take a bath and to put on clean clothes In one week the epidemic attacked at the period of its most rapid increase, went out like a fire under a deluge of water

A CONTRIBUTION TO THE STUDY OF YELLOW FEVER FROM A MEDICO GEOGRAPHICAL AND PROPHYLACTIC POINT OF VIEW IN THE MEXICAN REPUBLIC

This paper was read by Dr E Liceaga, President of the Superior Board of Health, Mexico The author presented the following conclusions

1 The places where yellow fever reigns and which can be considered as centers of infection are in the Gulf of Mexico, Vera Cruz, Frontera, Campeche and the districts on the northern coast of the Yucatan Peninsula, the last named separated by the Yucatan canal from the island of Cuba, where the fever also reigns On the great Pacific Coast, which belongs to the Mexican Republic, there is not a single yellow fever center

2 All the Mexican territory on the Gulf of Mexico and on the Pacific Coast is well adapted for the disease when imported

3 Yellow fever has become epidemic in the following places of the coast on the gulf Matamoros, Altamira, Tampico, Tuxpam, Papantla, Misantla, Nautla, Alvarado, Goarzavoalcos Minatitlan Lagang and San Juan Baptista de Tabasco

4 The epidemic has extended into the interior, but never into places situated more than 1,008 meters over sea level

5 On the Pacific *there is not* a yellow fever center, but it has been imported into the following places on the peninsula of Lower California, La Paz y Todos Santos, *on the* continent, Guaymas, Altata, San Blas, Mansanillo, Santiago, Acaponeta, Puerto Angel, Salina Cruz, Tonala Soconuzco Tapachula and San Benito, and in the interior in Hermosillo y Culiacan

6 Immunity against yellow fever is obtained after having had the disease in any of its forms It is possible that this immunity may be lost at times, but it is seldom the case, as

it happens with typhus, smallpox and scarlet fever, which may be had by a person who has had them

7 The vaccine of Jenner against smallpox, and others which science has discovered, authorize us to look for the one that will prevent the yellow fever The inoculations against this fever which Dr Manuel Caramona y Valle has practiced with success should be tried on a large scale, in a uniform manner, in order to be able to find out if they are efficacious If this experience confirm it, then they should be made compulsory in the countries where the fever reigns If they should not prove worthy, then the inoculation of blood serum as proposed by Dr Sternberg, from persons enjoying immunity, should be tried on a large scale and in a uniform manner

8 The purification of the drinking waters, used by persons who have to expose themselves to contract the disease, should be recommended The purification of the water used on board the ships leaving or calling at infected ports should be proposed

9 The sanitation of the places which are yellow fever centers should be done at once

10 To prevent, by means of sanitary police measures, the importation of fever into places where it can be developed

HOW SHALL OUR LEPERS BE CARED FOR?

Was read by Dr Benjamin Lee of Philadelphia, Pa He said the State Board of Health of Pennsylvania, and the Board of Health of the city of Philadelphia, have had some unpleasant experiences with lepers which had led both of these bodies to appeal to the general government to establish a colony or colonies where these unfortunates might be provided with the comforts of home and medical care and nursing and at the same time might cease to be a menace to the health of those with whom they were thrown in close contact The United States had only gone so far as to make the affection quarrantinable at the seacoast and to order those found suffering from it on arriving vessels to be at once returned to the ports from which they came

Dr Manuel Carmona y Valle of Mexico, contributed a paper on "Yellow Fever" Papers were also read by Dr Luis E Ruiz of Mexico, on "Typhoid Fever in the City of Mexico," "Some Reflections on the Infection and Contagion of Typhus Exanthematicus," by Dr Ramon Icaza of Mexico, "Registration," by Dr S W Abbott Wakefield Mass

Dr John H Rauch of Chicago Ill, introduced a resolution to suspend immigration until the pandemic of cholera in Europe was over which, after some discussion, was referred to the Executive Committee

The American Public Health Association elected the following officers

President—Dr E P La Chapelle of Montreal

First Vice-President—Dr Manuel Carmona y Valle of Mexico City

Second Vice-President—Dr J N McCormack of Bowling Green Ky

Treasurer—Dr Henry D Holton of Brattleboro Vt

Permanent Secretary—Dr Irving A Watson of Concord, N H

Place of next meeting—Montreal, Canada October, 1894

Note —Although the gathering was denominated an International Congress of Public Health, very few outside of the members of the American Public Health Association contributed to the proceedings The bulk of the work was done by the members of the American Public Health Association

After drafting introducing and adopting resolutions of thanks, the President declared the Congress adjourned

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New York County Medical Association —The first meeting of the New York County Medical Association after the summer vacation, was held on the evening of October 16, when Dr Edward G Janeway, who was until recently a Commissioner of the Board of Health, read a paper on "Dangers to the Public Health from Overcrowding Population" The discussion on it was opened by Dr Charles A Leale ex-president of the Association, who is especially familiar with this subject on account of his labors in connection with St John's Guild which every year treats so many thousands of the children of the tenement houses on its floating hospital excursions and at its seaside hospital on Staten Island Among others who took part in the discussion were Drs J R MacGregor, also an ex-president of the Association, and J Lewis Smith, the veteran authority on diseases of children A second paper was read by Dr Frank Van Fleet, on "The Necessity of Perfect Vision in the Education of the Young"

The County Association is in a most flourishing condition, as evidenced by the handsome register of members and manual of information just issued by it, which shows an active membership of no less than 920, as against 805 at the same time last year Besides the annual report of the Association, the work referred to contains the decision of the American Medical Association in regard to membership, and report of committee of conference in the interest of harmony in the State of New York, the report of the committee in regard to the revision of the Code of Ethics and By-laws of the National Association, lists of all the presidents of the New York State and American Medical Association, the present officers, and articles on the medical profession and the Columbian Exhibition the International Medical Congress and the Pan American Medical Congress

C, M & St P Railway Surgical Association —The first meeting of the surgeons of this road was held in room 536, Rand-McNally Building, Chicago, Oct 4 and 5, 1893

The meeting was called to order by Dr A D Bouffleur, the surgeon of the road at Chicago, who in a brief address of welcome, outlined the objects of the Association and the work of the session

Dr Solon Marks of Milwaukee, was elected chairman for the meeting Dr A J Bouffleur was elected permanent secretary, subject to the approval of the management of the company, which concurred in the selection

The following papers were presented

Injuries of the Head, Dr H B Hemenway

Shock in Railway Injuries, Dr L A Squire

Leading Indications for Treatment in Severe Injuries of the Extremities, Dr J A Jackson

Treatment of Contused and Lacerated Wounds, Dr Wm. Mackie

Importance of Controlling Hemorrhage after Railway Injuries, Dr Ira K Gardner

Antisepsis Simplified, Dr M S Caldwell

First Aid to the Injured by Trainmen, Dr A B Poore

Injuries to and About the Eye, Dr C D Westcott

Sacro iliac Dislocation, with a Case, Dr N M Dodson

Antiseptic Uses of Potassium Permanganate, Dr A L. Clark

Special Ethics of Railway Surgeons, Dr Geo R Moore

Technique of Amputations, Dr G D Ladd

A Case in Practice, Dr O W Phelps

A Case in Practice, Dr N A Drake

Each paper was thoroughly discussed As there were one hundred and thirty surgeons present, the meeting was both a numerical and a scientific success

President Roswell Miller addressed the Association on the relations of the surgeons to the management, and assured them of his hearty cooperation in all their efforts

The future management of the Association was consigned to Dr Bouffleur, the secretary, and an executive committee consisting of Drs A B Poore Wm Mackie and B Thompson

Pennsylvania Railway Surgeons —The Twelfth Annual Meeting of the Association of Surgeons of the Pennsylvania Company was held at the Seventh Avenue Hotel, Pittsburg, Oct 10 Members were present from all divisions of the system, and a large number were unable to reach the meeting on account of a railway accident In the absence of President J J Larkin of South Chicago, Dr Mont Linville of New Castle, presided

An interesting paper was read by Dr C B Stemen of Fort Wayne, on "Antiseptic Precautions in the Treatment of Railway Injuries," which was discussed at considerable length by the members present A number of other papers were to have been read, but were dropped from the program an account of the inability of the authors to be present Considerable business of a routine nature was transacted and the following officers were elected for the coming year Dr Mont Linville, New Castle President, Dr J B Vail, Lima, First Vice-President, Dr E J McCollum, Tiffin, Second Vice-President, Dr George C Stemen, Fort Wayne, Secretary and Treasurer, Dr H Nye, Enon, Pa, Dr L C Botkin, Burgettstown, and Dr S A Craig, Freedom, Executive Committee

The next meeting of the Association will be held in Chicago in October, 1894

The Railway Surgeons —The first annual convention of the Ohio Association of Railway Surgeons met at the Forest City House, Cleveland, October 12 President S S Thorne called the convention to order with twenty-five delegates present

American Public Health Association —The following officers were elected for the ensuing year Dr Emanuel P La Chapelle, President, Montreal Dr M Carmona y Valle of Mexico, First Vice-President, Dr J N McCormack of Bowling Green, Ky, Second Vice-President, Dr Henry D Holton, Brattleboro, Vt, Treasurer, Dr Irving A Watson, Concord, N H, Secretary Place of meeting Montreal, October, 1894

Medical Journal Publishers' Association —An organization was perfected at Hotel Willard, Washington, September 8 and elected the following officers President, Dr L B Edwards, *Virginia Medical Monthly,* Vice-President, Dr J C Culbertson, *Lancet-Clinic,* Secretary, Dr F King, *Polyclinic,* Treasurer, J MacDonald, Jr, *International Journal of Surgery,* Executive Committee Drs Stowell, LeGrand, Fairchild, Fassett and Chambers Next meeting at Cincinnati, in December

The West Tennessee Medical and Surgical Association will be held at Brownsville, Tenn, October 26 and 27 Dr J R Hillsman of Trezevant is President, and Dr F L Sim, the editor of the *Memphis Medical Monthly,* is Chairman of the Committee on Publication

The Northwestern Wisconsin Medical Association, held their quarterly meeting October 10 at Stevens Point, Wis

The Oneida County, N Y Medical Society held its semi-annual meeting at Rome, N Y, October 10

NECROLOGY

Dr H A Youmans, an old settler and highly respected physician, died at the home of his son in Waukesha, Wis, October 4

Dr Walter G Stebbins, died at Boston, Mass, October 8 of diphtheria

Dr Wm Fitch of Dryden, N Y, died September 14 He was graduated from Albany Medical College in 1846

Dr Clarence Andrews of Kansas City, Mo, at Adrian, Mich October 14

Dr Francis J Chamberlayne, at San Diego, Cal, aged 77, October 5

Dr Joseph VanDyke, at Charleston, Ill, October 12

Dr Benjamin Norton of Hornellsville, N Y, October 3

Dr L P Dodge of Farmington, Minn, died September 29

Dr T H Gibbey at Manchester, N H, October 16

Dr Emil Guelich, at Alton, Ill, October 15

Dr Richard A Matthews, athlete and physician, died of stomach trouble October 14, at the age of 28 years He was for two years a member of the *Evening World's* Corps of Physicians for the Sick Babies, and was also the surgeon for the Columbian line of steamships, which runs between New York and Colon Dr Matthews was born in this city and graduated from the New York University He began to practice medicine in 1891 He was a member of the old Manhattan Athletic Club, and played in its football team in 1887 He was a member of the Staten Island Athletic Club, and played in the lacrosse team He also rowed in the junior eight-oared crew of that club —*New York World*

MISCELLANY

The Cholera in Hamburg —Quarantine, S I, Oct 4, 1863 Dr Nash has lately written the following

To the Editor of the Times Democrat

'Having just arrived in New York on the 'Augusta Victoria' from the city of Hamburg I consider it my duty to state publicly the result of my observations while on my post there

"I have been stationed in Hamburg since Jan 6, 1893, as the representative of Dr Jenkins, health officer of the port of New York, and I think that during that time, with the opportunities at my command, I have been able to inform myself thoroughly as to the actual sanitary condition of the city, the ways of the authorities, and the interests which stand in so close a relationship with America, and I feel bound to contradict the unfair criticisms which have been passed upon the city, and correct the false impressions which have gone abroad as to the conditions prevailing there

"During the whole of the present year the health of Hamburg has been excellent, the average mortality being far below that of the principal cities of the world The cleanliness of the streets is exemplary, they are swept and scraped and washed until they almost shine again, the blind alleys and courts are also well looked after The street brigades are uniformed, and handle their implements in an expert manner The markets in the different sections of the city are models of neatness At the close of business hours each day every scrap of refuse and garbage is at once removed under the supervision of the sanitary police corps

'On my arrival the city was as yet unsupplied with filtered water, but now and since several months the city enjoys the boon of a pure filtered, germ-free water in abundance for all purposes I can hardly say enough in praise of the city and its authorities for the thoroughly scientific manner, the tireless energy and disregard of expense with which the enormous plant supplying the city with pure water has been established in the short time At ebb tide the water is led into immense basins, where it is filtered through different strata of sand pipes Bacteriological examinations repeatedly made of this filtered water have all testified to its purity, and its universal use has given additional proof of it

"An unfortunate accident occurred on the 16th of last month, by which unfiltered water obtained entrance into the service mains This accident was due to giving way of the earth, and was immediately repaired but the consequence of the contamination became apparent A few sporadic cases of cholera occurred, which, however spread alarm only in places far distant from the city, where the news was used to injure Hamburg, as had been done repeatedly on former occasions In the city there was no alarm, the people felt their security and confided in the efficiency of their sanitary authorities The result has warranted the expectation Altogether only a small number of cases occurred, mostly of a mild type, and the latest news shows that even these have disappeared The city will now doubtless return to its remarkable good health record, which, even during the hottest part of the year, was an extraordinary one

"Tourists and travelers to and from the European continent can not do better than choose the route via Hamburg on account of the superior sanitary conditions of the city as well as for its other attractions For Hamburg is a magnificent place To see the beautiful Alster Basins, surrounded by pretty parks and fine avenues, lined with handsome buildings and villas, is alone well worth a journey Good hotels, excellent restaurants, amusements to suit every taste, clean streets and the activity of life and business of a great commercial port, and other points to be considered

"A few words now regarding the Hamburg-American Packet Company

"This company has complied readily and thoroughly with the measures required by Dr J H White, the representative of the United States Marine Hospital Service, stationed in Hamburg, and also with whatever recommendations have been made by myself, as representing the New York State Quarantine Suggestions, of whatever nature, have been gladly received, and cheerful and ready help has been given to both of us in our work The disinfection of ships and baggage, the supervision and scrutiny of passengers and other measures tending to the welfare of all concerned are done under our control and, in my opinion, no steamships leave any port in more complete sanitary condition than do the steamers of this company Dr Jenkins has repeatedly made the same statement regarding the same steamers arriving in New York

"The company has also, of its own accord, frequently adopted precautionary measures of considerable importance and at great cost, solely for the purpose of guarding against the possibility of any danger

"As an American residing in Hamburg, and as an official I testify to the conditions as outlined above, and gladly bear witness to the sincerity of the intentions of the city authorities and of the great corporations located there, and if I ask you to publish this letter it is with full reliance on the American spirit of fair dealing, and with the hope that my statement may tend to remove unjust reflections I am, dear sir, yours very truly, DR GEORGE W NASH,

Representing New York State Quarantine at Hamburg

To Admit the Physicians—Opening of Health Department Hospitals to them to be considered to day The details of the plan to open the Health Department hospitals for contagious diseases, to the medical profession for the mutual benefit of the profession and the department, will be laid before the Board of Health this afternoon by President Wilson The plan is simple it proposes the appointment of six attending physicians, whose duty it shall be to visit the hospitals twice a week at any rate They may, if they choose, visit every day and at all hours

Besides these, a fixed number of internes will be assigned to the hospitals who shall act as assistant resident physicians and hold their places for six months each This is the system adopted in other hospitals the world over The internes will be graduates of the medical schools Their appointment amounts to the establishment of a post-graduate course, which will speedily become exceedingly popular

The attending physicians will be chosen from among the professors and experts of the four medical colleges in the city They will be chosen for their conspicuous ability and prominence as practitioners, and upon them will devolve a great share of the responsibility for the management of the hospitals As lecturers at the colleges they will be allowed to take their classes with them on their visits to the island, under the restrictions of the Department as to dress and disinfection Thus clinics will be set running in the most natural way—not once or twice a week, but probably every day,

Physicians and internes will be unsalaried, but the latter will live in the hospitals to which they are attached It is expected that the plan will be promptly adopted and the scheme, as here outlined carried out at once It is likely even that the staff of attending physicians may be chosen and invited to accept Nothing that has happened in the history of the department has claimed and received such hearty support on the part of the medical profession *The Evening Sun's* announcement yesterday of the impending opening of the hospitals aroused the interest of the doctors thoroughly It was the one topic of discussion among them yesterday Without an exception, they indorsed the new departure of the Health Department as the most intelligent and most promising move made by it in recent years—*New York Evening Sun*, Oct 11, 1893

The Illinois Board of Health—The Illinois State Board of Health has issued a circular on the necessity for public vaccination, and says

"Indications are now multiplying, which point to a general epidemic spread of the disease throughout the whole country as cold weather approaches Introductions of the contagion will thus grow more frequent and, sooner or later, are likely to find any unprotected community and there establish an outbreak The State Board of Health urges upon you the necessity of preparation while there is yet time—during the remaining weeks of pleasant autumn weather Vaccination of all unprotected and revaccination of all those vaccinated within the past few years should be secured without delay

"The State Board of Health enjoins upon all local health authorities the urgent necessity of measures to secure the vaccinal protection of all over whom they have control Local ordinances—if not already enacted—should be passed forthwith, enforcing vaccination or revaccination upon all school children, public, private and parochial, upon school teachers, janitors and others, upon all public employes and officials, through all employers of labor, skilled and unskilled, upon their employes as a condition of further employment, through superintendents of public and semi-public institutions, upon every inmate, employe and official of such institutions, all tramps, and especially upon immigrants from abroad The Board will lend every assistance in its power to secure the end in view and invites correspondence on the subject, to be addressed to the secretary

"By order of the Board JOHN W SCOTT, M D,

"*Secretary*"

The First Professional Organization—Norwich Doctors Wanted a Medical Practice Act in 1774—The medical practice act suggests the historical fact that the first step toward professional organization and protection in Connecticut was taken by Norwich physicians on the 3d of March, 1774 On that date the following advertisement appeared in reference to the project

"A number of Physicians in the County of New London, taking into consideration the importance of those that enter the practice of Physick being endued with competent knowledge to prosecute the undertaking in such a manner as shall best promote the public good, request their brethren of the Faculty in said County to meet at the house of Mr Azariah Lathrop, in Norwich, on Thursday the 24th inst, at 10 o'clock in the forenoon, to consider upon the matter and prefer a Memorial to the General Assembly at their next Session, that the Practice of Physick may be put under some better regulation"

This memorial, which was signed by Theophilus Rogers and ten other physicians, was the first movement toward medical organization in Connecticut "Quacks and charlatans" had disgusted the regular physicians, and their demand was for the appointment of a committee legally authorized to examine and approve candidates, if found qualified The movement, which was in advance of the age, was negatived in the lower house, but the memorialists were the pioneers in the cause of American medical organization, and their unsuccessful first attempt was the initiative step in a series of efforts which have since resulted in the permanent establishment of flourishing State and National Associations, which separate the qualified physician from "the ignorant pretender"—*Norwich* (Conn) *Bulletin*, Oct 9, 1893

Yellow fever continues its ravages at Brunswick, Ga, from twenty-five to thirty new cases appearing daily A despatch from Brunswick on Monday stated that supplies of food were being received very slowly and that unless large contributions were quickly made there would be great suffering among the people

Report of Muncie Smallpox Cases—The report of the Muncie smallpox cases has been submitted to the Governor It shows that since the disease first appeared there the number of cases has been 136 Fourteen cases are now under treatment at homes and the hospital Thirty-nine convalescents are reported The same number are well, but have not been discharged Thirty-one cases have been cured There have been sixteen fatal cases Last week $1,000 was appropriated from the State epidemic fund to aid in suppressing the disease The Governor will decide to day how much will be allowed for the next seven days The cases are being concentrated at the hospital, and it is thought that not so much money will be needed —*Indianapolis News*, Oct 13, 1893

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I do not desire to present any novel ideas with regard to the origin of glaucoma, or to recommend any special treatment of its earlier manifestations My object is rather to direct attention to what I believe to be the principal cause of glaucoma simplex and acute inflammatory glaucoma, and to suggest the use of well known remedies for a condition which may prove the starting point of the disease The nature of this obscure trouble has always been a subject for speculation, from the earliest days of medicine, but it is only comparatively recently that its pathological character was understood The work of the anatomist, the physiologist, the pathologist and the clinician have shed much light upon what was obscure to the older physicians Until the time of von Graefe the character of glaucoma was very obscure, his discovery of its general character was a very great step forward, but left unexplained how or why the increase in intra ocular pressure was caused The circulation in the eye, and the nature of the ciliary body were then not understood but von Graefe was shrewd enough to refer the cause of the pressure to a disturbance of the circulation When the anatomist and physiologist had made clear the wonderful method by which the nutrition of the structures of the globe is maintained and had proved the existence of a current from the ciliary body through Schlemm's canal and into the triangular space, it was seen how obstructions of these small channels might readily cause such a disturbance in secretion and excretion as might cause an increase of intra ocular pressure and thus the symptoms of glaucoma and, if maintained, the disease itself (*Knies and Weber*)

Any cause which produces a rise in the intra ocular pressure will give rise to some, at least, of the common symptoms of glaucoma They may be produced temporarily in the normal eye by a simple practice that I have often adopted If the head of a subject possessing normal eyes is held in a dependent position and at the same time pressure is made on the eyeball for a short time, the subjective symptoms produced will be similar to those of disease The globe becomes tense to the trained touch, chromatic rings surround a bright point of light and these symptoms accompanied by severe pain, if the experiment is carried far enough, and occasionally ciliary neuralgias are produced These symptoms are evidently due to a disturbed circulation, and the study of the pathological conditions existing in glaucoma has confirmed the reasoning of the anatomist and physiologist The cupped disc shows the effect of the intra-ocular pressure and where inflammatory processes have been set up their effects are found in the ciliary region The cause of the increased intra-ocular pressure has therefore been justly assumed to be a disturbance in the fluid circulation of the eye *But what should cause a disturbance in a body* so remote from external influence as the ciliary body? To this question no entirely satisfactory answer has yet been made, and I would therefore suggest that a further inquiry be made to determine the more remote causes of these changes in the circulation It is very well known that the blood circulation is under the control of the sympathetic nervous system, and these nerves are well supplied to the various tissues of the eye, undoubtedly many, if not most of these are efferent, but undoubtedly also many are afferent, and control the circulation in the arteries of the eye Remembering how frequently the blood vessels are acted upon by purely nervous influences of varied character, and how quickly purely normal and transitory changes may be rendered pathological, I could not but imagine that some, if not many, cases of glaucoma were caused by the result, either of repeated sympathetic shocks to the muscles controlling the blood vessel system of the eye with resultant venous stasis, or even as the result of a single severe shock which acted as a paralyzant to the sympathetic system of nerves The idea is not new, as Donders long ago referred to this, but I believe that its therapeutic importance has not been enforced Von Graefe thoroughly recognized the importance of a variation of the vascular pressure as causative of glaucoma whether inflammatory or not He considered the origin of these variations to be intra ocular, but with our present knowledge of reflex action this restriction is unnecessary

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Case 2—Mrs K, aged 55, eight children, three living, no miscarriages Says always enjoyed comparatively fair health Dates the gradual loss of vision from the time of an unfortunate accident, causing the loss of several lives for which her son was in a measure responsible Left eye absolute glaucoma, right eye glaucoma simplex Iridectomy on right eye

Case 3—K H, aged 39, married, no children, no miscarriages Dating from sudden death of father and subsequent family trouble her sight has been more or less bad, large, deep glaucomatous cup in right eye, shallow excavation with tapering of veins in the left eye Arterial pulsation, increased tension, patient refused operation

Case 4—F O, aged 55 years, cigar maker, patient profoundly neurasthenic and hysterical, similar history as to family troubles and great mental strain Case of glaucomous simplex

In all of the above cases they were referred to their accustomed medical attendant, no organic trouble was reported with the exception of the second case, where albumen and casts were found in the urine

I do not wish to be understood as insisting that every case of glaucoma simplex, or acute inflammatory glaucoma has necessarily a nervous origin, or that the disease is *always* caused by reflex action through the sympathetic nerves I believe, however, that a majority of cases can be traced to a nervous starting point, and it is to the cases thus caused that I wish to direct your attention

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Of course after the disease has developed there is nothing but the old routine to employ Early iridectomy and the use of eserine comprehend the sum total of the treatment It is in the earlier stages of the disease that the glaucoma offers the best prospect for useful therapeutic study, and it is to direct your attention to this study that I have engaged so much of your time

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Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY H GIFFORD, M D
OMAHA NEB

The proposition which I wish to maintain is that when the intra ocular tension is high, a small incision through the sclera into the anterior part of the vitreous, made immediately before the various operations for glaucoma in which the anterior chamber is opened, greatly lessens the dangers which ordinarily attend such operations These dangers are in brief 1, that the iris may be wounded or the incision into the anterior chamber be improperly made on account of the shallowness of the chamber, 2, rupture of the suspensory ligament with loss of vitreous or sublaxation of the lens, 3, tardy healing of the wound, 4, failure of the anterior chamber to refill, 5, failure of the operation to immediately relieve the high tension, 6, rupture of retinal or choroidal vessels

That a small incision into the vitreous, made two or three minutes before a glaucoma iridectomy, for instance, must greatly lessen these dangers is, I think, obvious from a moment's consideration of the conditions With rare exceptions, glaucomatous eyes are hard because there is too much fluid in the vitreous, a scleral incision about one-eighth inch long, allows this excess of fluid to drain off without permitting the escape of any appreciable amount of the vitreous jelly The contents of the vitreous chamber being thus lessened, its tension becomes, for an instant, less than that of the anterior chamber, and the latter immediately tends to become deeper, thus facilitating any incision into it, beside tending to break up any adhesions which may have formed at its filtration angle With a low pressure in the vitreous, the danger of a rupture of the zonula must of course be less than when the pressure from behind is high It is equally plain that the preliminary sclerotomy favors a prompt closure of the wound and decreases the chance that at the evacuation of the aqueous the iris may be so firmly pressed against the cornea as to retard the refilling of the anterior chamber, or perhaps prevent it entirely, as in the cases of so called malignant glaucoma Whether the danger of rupture of the retinal or choroidal vessels be lessened by a preliminary sclerotomy may be questioned, since when it is done, the two incisions probably remove more fluid from the eye than a simple iridectomy would, it might be held that the danger of internal hemorrhage would be increased, but where the sclerotomy is made slowly and the vessels are allowed a few minutes to accommodate themselves to this first reduction of pressure, I think the chances are at least even, that the total danger to the vessels is not increased

I make the scleral puncture, sub conjunctivally, with a sharp von Graefe knife, at a point near the outer border of the inferior rectus one fourth inch from the limbus, enlarging the cut to a length of about one eighth inch Made in this way the additional risk involved is practically zero, and by injecting a drop or two of cocain solution under the conjunctiva, the scleral cut is rendered as painless as the corneal section

Primary glaucoma is a rare disease in my region, so much so that in the last two years I have had but four cases in which the preliminary sclerotomy seemed to be called for, and I feel like apologizing for the small amount of clinical material which I have to illustrate my theoretical conclusions In two of these cases it was made immediately before making an iridectomy, with an excellent result in each case In the other two cases, an iridectomy had already been made and the scleral incision was used as a preliminary to extracting what remained of the lens In one of these, the patient was Miss T , age 27, who came to me about Sept 15, 1892, with the history of glaucoma of the left eye of several years' standing Two years before, a broad iridectomy had been done elsewhere without permanently relieving the tension The eye was sightless and painful at times, with tension + 2 A broad posterior sclerotomy was made with only temporary relief, and as the patient was much averse to enucleation, I extracted the cataractous shrunken lens Before making the corneal incision, however, I made a posterior sclerotomy and had the satisfaction of extracting the lens with a sharp hook without the loss of a particle of vitreous from the corneal wound The operation afforded relief for but a short time, however, and in the course of six weeks the eye was eviscerated The case simply indicates the advantage of the preliminary scleral incision when the lens has to be extracted from a hard eye, for without it the extraction in this case would almost certainly have been followed by a gush of vitreous

The fourth case illustrates the same principle, but as the history exhibits the unusual feature of glaucoma developing after a broad preliminary iridectomy for uncomplicated cataract, together with one of the so called spontaneous cures of cataract, I give it in detail A F , age 56, German, came to me April 15, 1887, on account of blindness of the left eye I found the eye to contain a nearly mature cataract, rather whiter than the average, with nothing else abnormal to be seen about the eye Light sense and projection first rate The other eye showed slight central opacities of lens, but was otherwise normal, V = 20 50 + A preliminary iridectomy was made on the left eye and contrary to my present custom it was made fully as broad and peripheral as the average glaucoma iridectomy The healing was normal and the patient left the hospital in a few days During the next five years the man was seen once or twice but showed no perceptible change in either eye On Feb 18, 1892, he returned, stating that the sight of the left eye still remained unchanged (he could count fingers) up to the end of December, 1891, when the eye began to pain him and the sight to get worse To my surprise I found the eye blind except for uncertain light perception at the outer side of field, no projection $T + 1\frac{1}{2}$, eye injected and painful The cataract had undergone spontaneous resorption with the exception of the greenish-yellow nucleus, which was dislocated downward and bobbed about with the movements of the eye A red reflex could be obtained from the fundus but no details could be made out No history of a trauma could be elicited Right eye as at first examination V = 20 40 — with + 1 D Without having much faith in the theory, I proceeded on the supposition that the movements of the nucleus might keep up the glaucoma, and extracted it with a sharp hook after a preliminary posterior sclerotomy, without losing a particle of vitreous at the operation After forty-eight hours a minute bit of vitreous was found between the lips of the corneal wound, but this soon disappeared and the healing was otherwise normal Some weeks afterward the man had a slight attack of pain in the eye but with this exception the relief afforded by the operation has been permanent The occurrence of primary glaucoma after a broad iridectomy is rare, if not unique The coincidence of glaucoma with spontaneous resorption of the cataractous lens has recently been noted by Witvalsky, and in my case, as in his, the onset of the glaucoma probably preceded the beginning of the resorption of the lens

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Case 2—Mrs K, aged 55, eight children, three living, no miscarriages Says always enjoyed comparatively fair health Dates the gradual loss of vision from the time of an unfortunate accident, causing the loss of several lives for which her son was in a measure responsible Left eye absolute glaucoma, right eye glaucoma simplex Iridectomy on right eye

Case 3—K H, aged 39, married, no children, no miscarriages Dating from sudden death of father and subsequent family trouble her sight has been more or less bad, large, deep glaucomatous cup in right eye, shallow excavation with tapering of veins in the left eye Arterial pulsation, increased tension, patient refused operation

Case 4—F O, aged 55 years, cigar maker, patient profoundly neurasthenic and hysterical, similar history as to family troubles and great mental strain Case of glaucomous simplex

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COMMENTARIES ON DISEASES OF THE LACHRYMAL PASSAGES

Read in the Section on Ophthalmology at the Forty-fourth Annual Meeting of the American Medical Association.

BY H. GRADLE, M.D.
CHICAGO.

The objective sign of disease of the tear passages, viz. the overflow of tears, varies in degree in different patients. From the history and by the personal examination, it can be learned that while the eyes of some patients water continuously as long as they are awake, others notice the watering only when exposed to wind, smoke or dust, or on using their eyes under the condition of eye strain. In this class of patients the tears accumulate only while some stimulus excites the tear gland, but in the first mentioned class the activity of the tear gland is a continuous one. As far as we know, the secretion of the lachrymal gland is, however, not a continuous one under normal circumstances. Thus it has been noticed in congenital, absolute impermeability of the tear passage and after surgical obliteration of the tear sac, that the tears appear only when some external stimulus calls them forth. If hence an eye waters when no such external cause accounts for it, there must be some morbid irritation which maintains the continual activity of the glands. It can be proven therapeutically that in some instances the source of this reflex secretion is an intra-nasal anomaly, but in others the origin of the reflex appears to be the disease in the tear passage itself.

Observation has taught me that it is of some importance to distinguish between these two classes of lachrymal disease, viz. the cases with occasional and the cases with continuous lachrymation, although in some exceptional instances it may be difficult to decide to what class the patient belongs.

In those cases in which lachrymation is not continuous it is sometimes so slight that the patient does not speak of it. Hence if an operator is not on his guard he may overlook the presence of a purulent dacryocystitis in operations on the eyeball. In other instances, relief may be sought for some secondary condition caused by the lachrymal disease, without the existence of the latter being known to the patient. I have seen two instances of chronic purulent conjunctivitis in which the patients did not at all mention watering of the eye, but where pressure showed pus in the tear sac. In both patients the conjunctivitis, hitherto rebellious to treatment yielded readily on attending to the lachrymal disease. I have also seen some instances of blepharitis and asthenopic complaints in which the prime cause, viz. an obstruction of the tear duct could be proven objectively, but could not be inferred with certainty from the patient's statements, an observation previously spoken of by Becker (Af. O. xix 3, p. 353).

On the other hand lachrymation by itself is not necessarily indicative of obstruction in the passages. Whenever the tears are secreted too fast, they can not be carried off by the healthy canal as is shown by physiological crying. Weeping hence occurs with normal passages in acute inflammation of the eye and sometimes also in consequence of eye strain. Nasal irritation, too, causes in some instances a flow of tears too copious for the capacity of the normal tear duct.

Since diseases of the tear passages are most frequently caused by nasal anomalies we find at times lachrymal obstruction associated with irritative lesions in the nose which determine a continuous flow of tears. The cure of the nasal anomalies may in such instances change the continuous to a periodic lachrymation, even though the lachrymal obstruction persists. In other instances, however no intra-nasal source of reflex lachrymation can be found, and the cause of the steady activity of the lachrymal gland must be sought in the disease of the tear passage itself.

According to my experience the prognosis of disease of the lachrymal passages is largely determined by the occasional or the continuous character of the lachrymation. When the eye waters only on exposure to wind and dust or on severe exertion the disease is, as a rule easily removed, while in those patients whose eyes water continuously therapeutic results have either been difficult to obtain, or were entirely unsatisfactory in my experience. It has seemed to me that the choice of the therapeutic method may determine the rapidity of the cure, but that the completeness and permanency of the results depend on the nature of the disease rather than on the mode of treatment. It may of course be suggested that these statements are self-evident, that mild cases are more easily cured than pronounced disease. But this would only be a play of words. For in some of the instances in which the watering is not continuous I have found a most decided obstruction or firm closure of the passage, while again in some cases of very rebellious dacryocystitis with unremitting flow of tears, the patency of the sac is scarcely interfered with or easily maintained. Moreover in considering a case cured or not cured, I do not depend alone on the symptomatic indication of the epiphora, but judge by the patency to the probe in cases of stricture or the presence of pus in dacryocystitis.

In the discussion of therapeutic methods and results it seems to me important to insist more on the distinction between stricture of the passages on the one hand, and dacryocystitis on the other, than is commonly done in literature. The two disorders are of a different pathological character and require different plans of treatment. It is common, however, to read of the same treatment used without discrimination in both affections. But what I have said of the influence of the lachrymation on the prognosis applies equally to both forms.

In obstructive disease of the passages I have largely employed the electrolytic treatment described by Jesop and Stevenson. The lachrymal probe is made the cathode of a current of four to six milliamperes lasting one to three minutes, shocks being avoided by creeping into and out of the circuit. A convenient way of doing this is to vary the pressure of the sponge or leather-covered positive electrode upon the well wetted skin of the face Where possible without much resistance I have entered the intact punctum dilated by a conical probe with a Bowman No 1 or even a fine platinum wire Where the punctum was narrow I have, however, nicked it After the current has passed a sufficient time but never more than three minutes, the probe which may have been grasped tightly by the walls while entering is felt to fit loosely It is hence possible to introduce a probe more easily while the circuit is closed than while it is open, provided there is no absolute closure of the passage

As the ultimate result of electrolysis I can present the following data while it is not frequent that permanent benefit is obtained from a single sitting, three to five electrolytic dilatations will restore the patency in most instances of lachrymal obstruction in which lachrymation is not continuous, It is thus a quicker mode of relief than ordinary probing Its greater efficacy I have likewise observed in comparative trials on the two eyes of the same patient, and in some of the more tedious cases by using the same probe at alternate times with and without the current But when no probe can be made to enter without undue force, it is less painful to the patient and as far as I can tell more useful in the long run to make at once a thorough Stilling's incision If after this the patency does not persist I have sometimes found it advantageous to use probe No 6 with electrolysis But there are instances with much continuous weeping in which it is not possible to keep the passage open by any therapeutic means The prognosis, however, is better if the continuous lachrymation is of nasal origin If in such cases the causative nasal anomaly can be removed, the weeping changes into the intermittent type and the tendency to reestablishment of the stricture ceases

In purulent dacryocystitis the results obtained by a free internal incision depend on the condition of the sac membrane My experience leads me to think that this is indicated by the degree of lachrymation In any instance in which the eye was ordinarily dry except when irritated by the usual stimuli of lachrymal action, the purulent secretion diminished progressively from the time of the operation It is in this class of cases that Stilling's assertion so ably defended by Thomas last year, applies literally, viz that a single incision is sufficient for a cure without subsequent probing The result has been the same, both where the knife met with considerable resistance and where the operation showed no real stricture But I have learned to lay stress on the regular evacuation of the sac by pressure In fact in very young children dacryocystitis will often heal by this procedure alone, without any incision whatsoever When the lachrymation due to an inflamed tear sac is a continuous process the incision is not so likely to lead to a permanent cure In some instances in which the caliber could not be maintained by the incision alone, electrolytic dilatation with large probes has been of service But there are cases, presumably those with polypoid degeneration of the sac wall in which the passage stays clear, but the purulent secretion and overflow of tears do not cease entirely Some of these I have been able to benefit by nitrate of silver injection (2 to 4 per cent) and others by nasal treatment But still there remains a minority of patients in whom the continual weeping and purulent secretion can only be cured by obliteration or extirpation of the sac

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THE TREATMENT OF NASAL DUCT OBSTRUCTION

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY CASEY A WOOD, CM , M D

PROFESSOR OF OPHTHALMOLOGY IN THE POST GRADUATE MEDICAL SCHOOL, CHICAGO OCULIST AND AURIST TO COOK COUNTY HOSPITAL OCULIST TO THE EMERGENCY HOSPITAL AND ALEXIAN BROS HOSPITAL

I find that some writers treat the whole subject of nasal duct obstruction in a sort of light and airy fashion, as if they were dealing with tarsal cysts or the removal of a foreign body from the conjunctival sac Others run along in a most gloomy vein, entirely discouraging to the seeker after surgical consolation in the hour of doubt

These facts have impelled me to bring before you some conclusions I have arrived at, regarding the treatment of this condition, both to introduce the subject and in the hope of hearing your criticisms

First of all, how shall we distinguish between true organic stricture of the duct, and obstructions due to swelling of the mucous membrane? I have come to regard the answer to that question as a necessary preliminary to treatment and I have mostly applied this test when the sac is enlarged and pus can be squeezed out of one of the puncta, an organic obstruction (at least stricture of the soft parts) is present, and I have rarely seen a case where even the most extended and carefully pursued treatment by syringing, irrigation or other procedure, preserving the integrity of the punctum and canaliculus, do more than palliate the discomforts of the case On the other hand, if there be little or no cystic swelling and the secretion be entirely mucous and not overabundant, the obstruction is a swollen or otherwise diseased mucous membrane and is, in a fair majority of cases, amenable to the milder kinds of treatment

Assuming that one must ferret out the first cause of the trouble in those cases where one has to deal with obstruction not of the organic kind, I feel certain that nasal diseases are the most important, an argument by the way, in favor of the oculist knowing something about the diagnosis of nasal troubles Further than that, there appears some reason for thinking that the mucous membrane lining the nasal canal is liable to atrophic obstruction (from inspissated mucus and muco-pus) in atrophic rhinitis, quite as much as from the swelling that goes along with the hypertrophic form Not enough is said about these matters The entrance of the duct into the lower nasal meatus bears I think, much the same relation to duct and sac and eye, that the neighborhood of the Eustachian entrance in the posterior nares holds to the tube, tympanum and internal ear We should know as much about it in treating nasal duct obstruction—especially in those conditions not the result of organic disease—as we try to discover of the Eustachian entrance in middle ear disease

It is often possible, particularly in the atrophic forms of nasal disease and in some other cases where cocain can be used, to see, if not the opening itself, at least the vicinity of that opening For this purpose I would suggest, when simple anterior rhinoscopy fails, a very small post-nasal mirror

Dr Emile Berger in his very instructive monograph (*Les maladies des yeux dans leurs Rapport avec la pathologie générale* p 165) pictures a mirror of this kind 4 mm in diameter but I think the larger sizes can often be used with better results If the neighborhood of the opening require special treatment, it should receive it quite apart from that administered to the nose as a whole

Having first proven by means of a small Bowman's probe—without the use of cocain which is likely to lead one astray—the patency of the canaliculus as far as the sac, *the amount of obstruction* within the duct (I do not mean its mere permeability) may be judged by the ease or difficulty with which one can inject watery fluid into the nose In my experience this procedure furnishes us with a fair indication as to whether in a given case the treatment is—other things being equal—likely to be prolonged or not

Coming to local treatment of the duct proper, I can not understand how, whether in cases of true stricture or not, the passage of the smaller probes, say Bowman No 1 or 2, through the intact punctum and along the intact canaliculus, into the nasal duct can possibly do any good I have often seen it do harm If introduced under cocain in sufficient strength to anesthetize the sensitive mucous membrane, abrasion of some part of the passage is sooner or later pretty certain to be produced Because it is not an easy maneuver, that of passing a probe of this kind so that its small, sharp end will strike the superior opening of the duct without injuring the membrane that covers it But if one does manage it upon every occasion—*cui bono?* It is not large enough in the first place, to exert a healthy action upon any form of obstruction I know of and does not, when once in, give us any information not more easily and more safely obtained by other means

Most cases of nasal duct obstruction—aside from stricture—can be cured by the local application of appropriate remedies, and it seems to me rational that the *sort* of local remedy is of importance Most observers speak in a vague way about the nature of these, but why should we not treat the swollen or otherwise diseased mucous lining *here* according to the local condition, so far as we know it, or are capable of guessing at it? Anel's or Meyer's syringe, and those patterned after them, as usually sold, have too large a point It is usually necessary in using them to first introduce the punctum dilator Again, the barrel is usually too small, requiring repeated removal and introduction of the point when much fluid is needed To remedy these defects I would suggest that a fine hypodermic needle, whose end has been cut off and rounded by a careful workman, should be attached to a good large barrel It is then less distressing to the patient and makes on the whole a more useful instrument With it one may flush the whole tract painlessly, easily and effectually

Far better than any of these, when the duct is moderately patent, is the lachrymal irrigator which anybody can have made at a small cost It is nothing but a reservoir, best placed ten feet above the patient's head, a piece of rubber tubing, a stopcock and the altered hypodermic needle aforesaid All the operator has to do is to introduce it (and it is much easier of introduction than the point of a lachrymal syringe) and irrigate as much as he pleases

Whatever I have done in these cases I rarely find that my patients present themselves often enough for treatment One must have some kind of supplementary home procedure, and I know of none more simple and effective than that which Gould speaks of in a paper published last year in the *New York Medical Journal* After a somewhat similar fashion I have been instructing my patients to help cure themselves for several years past They soon learn to keep the sac emptied—by pressing upon it and forcing its contents into the nose—and afterwards allowing it to refill with the curative fluid applied at the inner canthus

When stricture of the soft parts is present there is nothing for it but the knife and the use of the larger probes But with a proviso—it seems to me to be a very weak and ineffectual kind of surgical procedure, that of doing the one without some guarantee that the other will be persevered in for several months afterwards, if need be

Not many ophthalmic surgeons appear to entertain anything like that high respect for the intermediate lachrymal apparatus which its important functions seem to demand So far as I know, the slitting of a canaliculus is never followed by a restoration of punctum and small canal, so that the peculiar suction force, exerted mainly by Horner's muscle, is once more possible The ineffectual slit canaliculi that roam this and other countries will surely rise up in judgment upon us At any rate they serve to discourage the neighbors of their possessors from being operated upon in cases where an operation is loudly called for

How to introduce the probe and keep open the passage after the stricturotome has done its work—that is the rub I teach my patient to introduce his or her own probe It can easily be done within ten days after the use of the knife and is a real solution of the question I feel sure that the majority of patients will not come week after week and month after month to have probes introduced For one reason or another their attendance ceases, there is a relapse and one's reputation suffers in consequence I have and have had all sorts of people, children, delicate nervous women, busy men and others keep up their probing in a way which I am certain I could never myself have done Moreover the patient in this way, shares directly the responsibility of the case It is his or her diseased duct and a failure to comply with the contract lays the blame at the proper door

Finally, there is a class of cases in which in spite of long continued patient, diligent and in my judgment, judicious treatment, there still remains a troublesome amount of epiphora I do not know how to classify such cases nor am I very sure that I know why the lachrymation persists It seems to me the lachrymal gland is made to act in some peculiar reflex manner, by the abnormal conditions existing in or along the lachrymal passages and, as we can not entirely remove the cause—can not restore these passages in some cases to the status *ante quo*, the incitement to lachrymation remains

Dr Gould—I am sorry I arrived too late to hear Dr Gradle's paper in full, but I wish to say a word in regard to the plan of treatment which I have found successful in these obstructions of the lachrymal duct The patient being in a recumbent position, I flood the eye with a simple astringent and antiseptic solution Then emptying the sac by pressure, I again allow the solution to pass into the sac and duct, again pressing it out, and so on for several minutes twice or three times a day I have been carrying on this plan of treatment during the last year and have found only two cases where it was not successful It has certainly been satisfactory so far as my own practice is concerned, and I have received word from two or three others who have found it equally successful I find it often impossible to tell at a glance just what sort of stricture we have, and this at least is a ready means of differential diagnosis I believe it will effect a cure in all cases where the stenosis is functional, due to congestion, etc , but not of course when there is organic stricture

Dr Bettman—It seems to me that the division referred to by Dr Gradle is a very wise one indeed There are a great number of cases of epiphora where there is no stricture, but a hyper-secretion of tears due simply to reflex action from membranes of the nose In these cases I have been content to wash out the lachrymal passages, and if I find water passes through easily into the nose I am sure the duct is opened To the remark made by Dr Wood in reference to the introduction of probes by Becker, I would say that Dr Becker would not have been satisfied to use the 1 and 2 only, but he used 4, 5, 6 and 7 He passed them in rapid succession one after another, after having dilated the lachrymal duct with a No 5 Bowman, tapering to a fine point

THE CURVILINEAR REFLECTION OF WEISS AS A PRODROMAL SIGN OF MYOPIC DISTENSION

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY B ALEXANDER RANDALL, M A, M D

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In a paper in the *Medical News* of Feb 9, 1889, the writer called attention to a phenomenon first described by Weiss at the Baden Baden meeting of German scientists and physicians ten years before, and asserted to be a prodromal sign of myopia Another report on the subject was made by Weiss to the Heidelberg Society in 1885, and his elaborate paper was published in Volume XXXI of Graefe's Archives The matter has since received little attention, and Dimmer's note in his Retinal Reflexes (Die Ophthalmoskopischen Lichtreflexe der Netzhaut), and my paper in English, (also in Kl Monatsbl May, 1889) are about the only further references to it The careful study of Dimmer corrects the one minor point in which my view of the causation of the appearance seems in error, and gives full scientific corroboration of the facts, so the phenomenon may be regarded as real and noteworthy in a number of cases, and the questions of its frequency and prognostic significance come more distinctly and urgently forward

Except to ophthalmologists of extreme "evolution" proclivities, the questions of the causation and progression of myopia constitute most important subjects of study, and concern closely all who practice eye surgery, whether they have many or few actual myopes to deal with Myopia is a condition of refraction, and any statement that it is in itself a disease, meets at once a refutation and a recoil on the part of some to the view that it is a beneficent adaptation of the eye to its requirements The excessive outcry about the "school-myopia" has done harm to the cause of school reform and impugned the honesty, as well as the judgment and observation of the reformers The vast bulk of good, bad and indifferent studies and writings on the subject leave only a sense of bewildered disgust in the mind of any but the careful critic, for to the same investigator must sometimes be credited the worst as well as the best of the observations The requisite critical analysis has not always been given to the divergent data and statements bearing upon the subject, and any and every view can obtain apparent confirmation among the host of contributions to the matter

A general collection and analysis of the material available was made by the writer in the *American Journal of the Medical Sciences* of July, 1885, and extended in papers before the International Ophthalmological Congress of 1888, the American Ophthalmological Society in 1890 and the Ophthalmic Section of the American Medical Association in 1890, in the endeavor to sift the truth out of the numerous hampering or contradictory details which surround it As a result of these studies it has seemed to me unquestionable that hypermetropia is the natural primary condition of the eye of the child and suffers little change with growth towards adult life through any normal increase of the dimensions of the globe It does, on the other hand, constantly tend to diminish, as the result of pathological distension due to inflammatory softening of the tissues, as evidenced by changes in the eye-ground, most commonly about the optic nerve entrance These changes have been variously explained, and their inflammatory nature combated by Stilling and others, but the minute observation of careful ophthalmologists demonstrates the reality of their inflammatory character The study, therefore of these conditions of conus, distortion and excavation of the papilla, the 'drag" (Thomson, *American Journal of the Medical Sciences*, October, 1875) of the vessels and every other phenomenon which can give warning of the advancing process is abundantly worthy of attention Among these phenomena this curvilinear reflex of Weiss certainly demands consideration, and it is a subject for regret that it has not received wider and closer study

The appearance consists in a curved line of brilliant reflex, generally at the nasal side of the optic nerve and nearly concentric with its margin, shimmering and shifting like the other retinal reflexes, but marked by a certain constancy of form and position Its conspicuousness is increased by the employment of an overcorrecting convex, or an undercorrecting concave glass, which has led Weiss to assign it to a position in the vitreous and to ascribe it to a collection of fluid interposed between this humor and the underlying eye ground Like all the retinal reflexes, it is best seen in this way, yet it can be traced to the retinal level and recognized as proceeding from its limiting layer It is evidently due to the curve of the retinal surface, caused by the prominence of this margin of the nerve, and Dimmer has shown that it is an inverted image and *must*, therefore, proceed, not from the convexity of the prominence, but from the concavity where this passes downward into the general retinal level Thus formed, the "reflex-bogenstreif" of Weiss indicates a real prominence at the corresponding margin of the nerve and not a hypothetical detachment of the vitreous It is met most commonly in distending myopic eyes, although also seen in those which are hypermetropic, and my impression that Weiss is correct in regarding it as prognostic of increasing distension has been strongly, if not precisely, confirmed by extended observation While as yet unprepared, however, to fully substantiate this view of its significance, I desire to bring forward here some facts with regard to it and again to ask for it the careful study of ophthalmic colleagues

The question of the frequency of the observation of this phenomenon must receive a slightly different answer since my more frequent employment of a strongly concave mirror in studying and seeking it, for like the other retinal reflexes, it is made much more conspicuous by this means Examining in the autumn of 1891, 365 boys in a Philadelphia school, I noted it in but 40 eyes, and found it the next year in 124 eyes or 16 per cent It was doubtless overlooked or unrecorded in some cases on each occasion, as the conditions of a hasty examination in which it constituted but a side issue were not favorable to an exhaustive search for it, but it was found in 11 per cent of H and 26 per cent of M yet it seems certain that the eyes in that school will show no such percentage as the 38 per cent of Weiss' average finding in a Manheim gymnasium, with 69 per cent among the myopic

As to its significance, no positive statement can yet be made It has certainly been conspicuous in a group of cases of progressive distension of the eyeballs and consequent increase in refraction, and I have regarded it as so probably of unfavorable prognosis that I have employed redoubled precaution in all patients presenting it, in the effort to obviate or minimize such a change Hence I could report a number of instances where there has not yet been any change in the refraction On the other hand, one or two cases of progression have been met where it was absent—first and last It may be hardly necessary to say again what I have previously stated in this section, that in my experience the tendency of myopia to progress is not the rule, as sometimes stated, but is the great exception Hence my opportunities for observing these cases are not very large, and it seems better to try to enlist others in the study, for I think those who have sought this phenomenon have found it with rather increasing frequency and have reason to regard it as a warning that deserves consideration

The primary claim of Weiss, that the curvilinear reflex is frequently quite difficult to see and is hardly, if at all, discoverable even in some cases where it is to be expected, has been abundantly corroborated At the focus of the retinal level it is often inconspicuous in the most marked cases, and as the macular region generally shows a deeper level than the nasal border where it is formed, overlooking of its presence is most natural The narrow pupil interferes somewhat with its ready investigation, but the flood of light admitted through a wide pupil tends to make less conspicuous all reflexes The numerous shifting reflexes along the vessels, especially in young eyes, can confuse the picture, since the Weiss reflex, unless marked and typical, may seem but one of them Indeed, until a striking case is encountered, even the ophthalmoscopist who has looked for the curvilinear reflex may remain skeptical as to its occurrence Once well seen, it can hardly fail to interest the observer and raise questions as to how often he has failed to recognize it in the past

Whatever the precise causes, efficient and secondary, of myopic distension, (and under this head I include all increases in the axial refraction), visible changes about the optic nerve entrance are the rule, and the posterior pole of the globe generally shows a measurable depression Concomitant with this there is apt to be a prominence of the nasal margin of the nerve, giving rise to the curved surface from which the reflection proceeds The view of Hasner, which Weiss advocates, that distortion is caused by the pull of a too short nerve, has certainly some show of probability and should lead us to seek carefully for evidence of this prominence of the nerve margin in all cases The result of such a study will certainly be that many instances of it are noted, that changes in it will be observed in certain cases followed sufficiently long, and that an additional series of interesting and probably important studies will be contributed toward the advancement of our specialty

The number of instances of this phenomenon which I have thus far observed, and the short periods of their study, do not permit of my drawing any sweeping conclusions I can only say that I have seen more tendency to increase of refraction in these than in any other group of cases, and am forced to regard the presence of Weiss' reflex as calling for special precaution and guarded prognosis, with regular periodical examination of the vision and refraction

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A CASE OF PERSISTENT SPASM OF THE ACCOMMODATION, RELIEVED TEMPORARILY BY TENOTOMY OF THE EXTERNAL RECTI

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY ALBERT RUFUS BAKER, M D
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Miss P, aged 39, at the age of 33 began to suffer from headache, pain in eyes when reading In a few months was obliged to give up reading and using the eyes altogether Was treated by various physicians for nervous prostration, neuralgia, etc Finally advised to seek a change of climate A residence of several years in the West proving of no benefit she returned East for treatment

In May, 1892 she came under my care Family history good and her own health had always been good until the present trouble She is fairly well nourished, appetite good, bowels regular, sleeps well and no menstrual trouble or other difficulty Says she would be well if she could get relief from constant headache and pain in eyes when using them Headaches mostly occipital but much pain referred to temples and vertex

Upon examination, I found vision right eye 20-20 not improved with + lenses or cylinders, left eye 20-70 improved to 20-50 with + 1 D C axis 75, and an insufficiency of the internal recti of about four degrees for distance I ordered a pair of prisms 2 degrees each eye combined with cylinder for left eye, confidently expecting marked relief from headache Was much disappointed in finding that they were of no service I then resorted to the use of atropia and found a rather high degree of latent hypermetropia, and a slight astigmatism in right eye, vision under atropia uncorrected Right eye 20-70 with + 1 25 D S ⌣ 25 C axis 90, increased to 20-20 Left eye 20-100 with + 1 75 ⌣ + 1 25 axis 75 increased to 20-50 I prescribed right eye + 1 ⌣ 25 axis 90 ⌣ prisms base 2 in, and left eye + 1 25 S ⌣ + 1 25 C axis 75 ⌣ prism 2 base in and congratulated myself that I had made a very important discovery under the atropia and that all the difficulties would be at an end, but I was doomed to disappointment, and my patient with the expensively ground lenses was only able to see 20-100 with right eye, and 20-200 with left and notwithstanding a long, painful trial on the part of my patient the vision would not improve

I will not weary you in detailing all the changes

I made in these lenses, discarding the prisms, reducing the strength of the spherical lenses, bandaging one eye, systematically exercising the muscles with prisms, the persistent use of atropia at one time for three months without at any time relaxing the persistent spasm of the ciliary muscle. Dubosin, homatropin and the whole list of constitutional remedies including iron, arsenic, strychnia, zinc, phosphorus, anodynes, anti-spasmodics, coal tar preparations, etc., were used without benefit. It is not often that an intelligent patient will endure all the local and constitutional treatment I heaped upon her and being no better at the end of a year's treatment be willing to continue.

Although I have been performing tenotomy graduated and otherwise during the past nine or ten years, I still remain skeptical as to its relieving a case like the one under consideration, but after consulting with my friend Dr. Millikin, I determined to give it a trial. So I made a tenotomy of the left external rectus on April 1, and was greatly delighted on the following day to note that the patient could read 20 20 with right eye with + 75⌒25 axis 90 and 20-50 with +1 D⌒+1 axis 75 with left eye, the *first time there was any relaxing of the ciliary spasm* since the case came under my care excepting when under the influence of mydriatics. This continued for four or five days, patient was almost free from headaches. She was happy and so was I, and it was during this period of mutual congratulations that I sent the title of this paper to our secretary.

But our happy frame of mind was of short duration, the headaches gradually returned, the vision for distant objects became blurred with the spectacles. For a time she could see clearly in the mornings through the lenses, but later in the day everything became hazy and the old fashioned headache returned and at the end of two or three weeks was nearly as bad as ever. In the meantime a slight insufficiency of the internal recti of about two degrees again developed. A tenotomy of the right external rectus was made with no apparent benefit either to headache or vision. At present, the muscles are perfectly balanced for distance, a slight tendency to deviate outward for near vision. The headaches are as severe as ever. Mydriatics give slight relief from headaches as before the operation. It is altogether probable that in a few years with increasing presbyopia the patient will be relieved of her distressing symptoms of asthenopia, but I should not be surprised if she should suffer from some other reflex neuroses fully as painful.

I believe that nearly all the troubles we have with the muscles of the eyeball are due to, and are the direct outgrowth of the errors of refraction. This is generally recognized in cases of hypermetropia as a cause of strabismus. In most cases of muscular asthenopia we have the same excessive nervous stimuli sent to one pair of muscles that we do in strabismus, and those patients who have not sacrificed binocular vision, consequently suffer from pain and other nervous disturbances, due to the conflicting efforts at accommodation on the one hand, and those of convergence on the other. It has been my experience not infrequently in cases of errors of refractions, after correcting the ametropia to find that while I had relieved the pain due to the efforts at accommodation, I had disturbed the equilibrium that had become established between the efforts of accommodation and those necessary for perfect binocular vision, and thus set up a train of symptoms almost, if not quite as annoying as those from which the patient suffered before. And on the other hand, after performing a tenotomy of one or more of the recti muscles, I have relieved these patients of one kind of distressing symptoms, *only to be followed* by others fully as bad, so that I am skeptical as to the possibility of benefiting any case of asthenopia by a tenotomy in which prisms or the closing of one eye does not give temporary relief.

A pertinent question might be raised as to the frequency of persistent spasm of the accommodation. We oculists so frequently use atropia, prescribe spectacles, and if the patient returns complaining of a blurring of sight for distance tell him to continue the use of his glasses and the sight will clear up in time. Are we sure it does always clear up? Do not many of our patients discard our spectacles and return to their family physician or to the use of some popular headache cure to get relief? Or in these later days seek the advice of some of the *specialists—oculists* who make graduated tenotomies on every case in which there is a slight deviation of the eyes revealed by one of the many equilibrium tests. I think it was our genial ex-president Dr. Connor, who reported a patient upon whom thirty-two graduated tenotomies had been performed, without any marked relief of the asthenopia. I have seen several cases in which nearly as many have been done. I have a deviation outward revealed by this test of about four degrees in my own eyes, yet it causes me no inconvenience, and I should not allow any one to divide my external recti even partially.

These cases are all susceptible to mental impressions. They prove a fruitful field for quacks and charlatans in and out of the profession. They present the most brilliant cures effected by the *faith healers and Christian scientists*. The mental impressions of having had an operation performed will *effect* a temporary cure at least. Especially if the surgeon has enough of that peculiar attribute that inspires implicit confidence in the mind of his patient that the operation *will* cure.

A good illustration of this mania for operations is that presented by the "orificial" surgeons. Several of our Cleveland hospitals are filled with these patients so that it is difficult to find room for a patient needing a legitimate operation. It is the fashion now among certain classes of the community to have their rectum, *their* vagina, *their* urethra, and I am even informed in some cases, their umbilicus *stretched* by these "*orificial*" surgeons.

It has been my practice in these cases of asthenopia to first correct the error of refraction. If the asthenopia is not cured then resort to the use of prisms and the systematic exercise of the muscles. If the prisms, muscular exercise or the suppression of the image in one eye gives even partial relief I then propose a tenotomy, with considerable assurance that it will be of permanent benefit. But, in all cases in which no perceptible improvement can be obtained by the use of prisms, muscular exercise or closing one eye, I give a very guarded prognosis as to the result of a tenotomy, because in my experience the operative treatment of these cases has usually proved unsatisfactory. The *disease*, as I believe, frequently being the expression of a general neurosis and not amenable to ocular treatment.

SOME PRACTICAL EXPERIENCES WITH MUSCULAR ANOMALIES

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY T E MURRELL, M.D
LITTLE ROCK, ARK

I consider the Maddox rod the most valuable and reliable test for heterophoria that we possess Until I became acquainted with it I often had much trouble in arriving at any satisfactory conclusion as to the muscular tendencies Since its introduction diagnosis is in most instances made easy

The Graefe test is perplexing and unreliable in determining small errors in the lateral, and especially, in the vertical plane, the latter being extremely important even to so small an amount as half of a degree, which amount, and even less the rod test will quickly recognize The phorometer of Prince is a most convenient and ready application of the rod test, and is extremely satisfactory in detecting any error less than four degrees While far more accurate than any methods heretofore possessed for measuring the muscular balance, the rod test is not absolutely reliable owing to certain physiological laws resident in the visual act as will be shown further on

Since the very valuable contributions on the subject of heterophoria by Dr Stevens, with his comprehensive nomenclature for designating them, a new era has been opened up in ophthalmic practice Now that light has been thrown on this very important subject we can look back and recognize many cases in our experience that, for better knowledge we called retinal asthenopia, or some equally ambiguous title, and which after much vexation we relegated to the limbo of the incorrigible

No eye that is subject to tiresome vision is completely examined until the muscles are carefully tested for any tendency to deviate from a perfect balance This is now a rule with all accurate observers and we are astonished at the percentage of asthenopics who show some muscular anomaly In how far heterophoria depends on refractive errors, just as we know heterotropia does, is not yet clearly made out, but it is more than probable that some refractive fault, with or without an existing amblyopia, is at the bottom of nearly every such condition

I can hardly call to mind a heterophoric subject who was emmetropic, or had perfect vision in both eyes In view of this fact, some very competent men only correct the error of refraction and claim thereby to restore any want of muscular balance The most of us can not accept any such rule, although relief now and then comes under our personal observation, as in the following illustrative case

Mrs B , age 28, consulted me on account of inability to read or sew more than a few minutes consecutively without bringing on a severe headache and great distress Her general health had been greatly impaired by a confinement with severe lacerations some five month previous V=20-15 partly with either eye Ophthalmoscopic examination was made especially to settle a point of dispute as to the existence of a central lesion A normal fundus was found Under paralysis of the accommodation O D V=20-40 + 75 Dsph ⊃ + 25 Dcyl 90°=20 20 O S V=20 30 + 75 Dsph ⊃ + 25 Dcyl 90°=20 20 Rod test reveals an esophoria at twenty feet=10 degrees Ordered for her the cylinders for reading or sewing She wrote me a week later that the glasses gave her comfort A month later I heard that she could use her eyes more than she had done for months Not having the opportunity to see her and test her, I could not say positively the esophoria had disappeared, but certainly the asthenopia had, and this would lead one to infer also the esophoria According to a rule given further on, this case, with an esophoria of 10 degrees called for an operation

If one will carefully test all his refraction cases with the phorometer, he will find a large percentage of them show lateral deviations of a few degrees which, within a certain limit, say two or three degrees, I regard as physiological Repeated tests will show these deviations, however, to be variable The association between convergence and accommodation is so intimate that in many cases of either astigmatism or hyperopia uncorrected, we find an esophoria of two or four, or even more, degrees that calls for no special attention further than correcting the refraction By putting the accommodation in abeyance we may convert an esophoria, apparent or an orthophoria real, into an exophoria, as the following history will show

Mrs S , age 27, general health bad for a year, is very nervous at times and is subject to severe headaches Her physician sent her to me to see if her headaches and nervous phenomena could be induced by some ocular anomaly O D V=20 40 O S V=20 30 Ht=1 25 D each eye Orthophoria Ordered for her + 75 D sph for each eye for constant wear They seemed to relieve her for awhile, but she returned after two months complaining that the glasses did not relieve her any longer, although she could see better with them Rod test now shows exophoria=2 degrees at twenty feet and 8 degrees at twelve inches With prisms 1 degree each bases in, combined with the spherical glasses, she has easy vision

In the two cases just cited, we note the ill health and the nervous symptoms Heterophorias in my experience are most frequently found in the neurotic and, like refractive and other troubles in this class of people, are more difficult to relieve I have had under my observation at different times several members of one family, all of them of high nervous organizations, for refractive and muscular errors, in whom the most exact correction failed to give satisfactory results Hence they have gone the rounds of specialists, consulting the most eminent, with like unsatisfactory results in every instance

An eso or exo-phoria of a few degrees does not call for correction, unless there is well-defined asthenopia after the correction of any refractive error that may exist In these cases the addition of a prism or, when the result can be so attained, decentering the lenses will often give complete relief Those anomalous cases of esophoria for distance and exophoria for near, or sometimes the reverse, often do not admit of easy solution

Dr Stevens claims that in those cases of unstable balance of the lateral muscles, being at one time an esophoria and at another an exophoria, there is invariably a hyperphoria present This is a very wise and practical observation, and we should be careful in such conditions to carefully note the vertical balance There are exceptions to this rule, as will be seen from the following case that came under my observation

S K , age 8 years, complains of his eyes at school Says while reading the letters sometimes become mingled so that he can not distinguish one from another, but by looking off for a moment he again sees distinctly O D V=20-70 O S V=20 50 Paralysis by hematropin and cocain O D V=20-00, + 75 Dsph ⊃ + 25 Dcyl 90°=20 30 O S V=20 00 + 75 Dsph ⊃ + 25 Dcyl 90°=20 30

While watching him, I noticed one eye diverge fifteen or twenty degrees and instantly return to parallelism on my calling his attention On covering one eye while fixed on an object at 12 minutes it would diverge decidedly His mother now informed me that his eyes had always been doing this and were much worse when he was younger She said she had often noticed when he sat musing, that both eyes would seem to turn far apart, and that it used to be far more excessive and frequent than now He had binocular vision for all distances His convergence was about twelve meter angles, which he could hold for some time, in fact, he had a habit of looking excessively cross eyed for amusement On making the rod test I found no hyperphoria, but there was a variable lateral tendency There would sometimes be orthophoria and then exo- or eso phoria, the latter sometimes registering as high as eighteen or twenty degrees These wonderful acrobatic performances with his eyes astonished me The very strong tendency to deviate outward, as his mother had so often observed, and as was easily demonstrated by placing a screen over one eye would look like warranting an operation on the external rectus, but his very great power of convergence was a danger signal to any operative procedures So, desiring to watch the case longer, I determined for the present only to correct the small error of refraction He chose the minus rather than the plus cylinders, and expressed much satisfaction at the comfort they gave him A month later his parents went abroad and have not yet returned, but just before leaving I saw him and he said his glasses pleased him very much, and he had no complaints to make about his eyes In this case you will observe there was no hyperphoria, but it will be seen that after the most perfect correction of the refraction possible, vision was still barely two-thirds of normal, in other words, there is amblyopia, a chief factor, as has been already pointed out, in these heterophoric cases

We know that the vertical deviations are the most distressing, and can readily understand how they may so destroy the equilibrium of the eyes as to give rise to variable eso- or exo-phoria, but they are not the only factors in these conditions In fact the hyperphoria seems sometimes to be an after product of the eso or exo-phoria, and correcting the latter by an operation will very largely remedy the former The following case is interesting because of two features one, the persistence of troublesome diplopia in a case of long standing concomitant squint, and the other the presence of a hyperphoria which gave no trouble after the correction of the squint

Miss L, age 17 years, at 11 years of age began to have periodic squint, which became permanent at 14 years old She has been troubled with diplopia ever since the squint came on, varying with the squint when periodic and continuous since the squint has became permanent When I first saw Miss L I found the following conditions strabismus convergens of about 35 degrees with homonymous diplopia The squint is alternating but fixation is preferably with the left eye When the right eye fixes she has diplopia, seeing the false image with the left eye some thirty-five degrees to the left side She has no diplopia when the left eye fixes V=O D 20 40 O S V=20 20

Jan 16 Made a free tenotomy on right internal rectus, giving binocular vision immediately after the operation, and there was no longer diplopia in any direction

Jan 20 Under atropin O D + 4 Dsph V=20 25, O S + 2 50 Dsph V=20 20 Rod test now shows esophoria =16 degrees and right hyperphoria = 6 degrees, although she expresses much relief since the operation A prism of 6 degrees base down to right eye, correcting the hyperphoria, half corrects the esophoria The following glasses were ordered for her O D + 3 Dsph ⊃ prism 3° base down, O S + 2 Dsph ⊃ prism 3° base up With these she had easy and comfortable vision for some months April 25 She returns for further treatment as she is beginning to have diplopia again at times There is now a convergent strabismus of about fifteen degrees The hyperphoria is unchanged April 28 Made a careful tenotomy of the left internal rectus over correcting about four degrees Put in a suture correcting the excess May 2 Exophoria=8 degrees although she has ten meter angles of convergence Right hyperphoria = 5 degrees May 13 At twelve inches there is esophoria of three or four degrees and at twenty feet exophoria of same amount With the following glasses she has binocular vision at all distances O D + 3 Dsph ⊃ prism 3° base down O S + 2 Dsph

She returned home, wearing these glasses constantly, and a few months later she wrote me she was going to school and had no trouble with her eyes In this case, after correcting the esotropia the hyperphoria was corrected by a prism and the relief was complete, notwithstanding an exophoria for a distance and an esophoria for near

In adapting prisms for the correction of hetrophoria there can be no fixed rule, and in any given case it is very largely a matter of experiment The rule given with Prince's phorometer is, to correct one-half of a hyperphoria and from one-fourth to one half of an eso- or exo phoria I have found that we should correct almost, if not quite, the total hyperphoria where prisms are accepted at all, and a majority of the exophoria, while the proportion of an esophoria that will bear correction is usually one-half or less To avoid the constant use of prisms, which are so often unsatisfactory, the weak muscle is sometimes developed by a system of gymnastic training brought about by so placing prisms before the eyes as to increase the error already existing, and for the time forcing the muscle to do more work than ordinary While some surgeons claim satisfactory results from this system of treatment of insufficiencies, I must say I have found it tedious, laborious to the patient and in the end unsatisfactory in the majority of instances Perhaps the fault may be in the method and not in the principle, which is certainly philosophical to say the least

As commonly advised, prisms so adjusted as to put extra work on the weak muscles are to be worn a few minutes at a time, and the length of time increased daily If we but think a moment of the manner in which we go about developing the other muscles of the body we will see how very unnatural this is If, for instance, we want to develop the biceps we do not lift a weight, draw it near the shoulder and hold it there several minutes, and then lay it down until the next day, when we repeat the exercise in the same way, only holding it a little longer each day No, we alternately flex and extend the arm holding the weight, so as to contract and relax the muscles at short intervals This is the law that governs in all physical exercises where the development of a voluntary muscle is the end sought Why should not this same principle apply to the voluntary muscles of the eyes? I am indebted to my friend, Dr G C Savage of Nashville, Tenn, for the above suggestions He applies the principle to training the weak eye muscles in the following manner having adapted the prism of the required strength to give appropriate exercise to the weak muscle, the eyes are fixed binocularly on an object, say the printed letters of a page, for a few seconds (Dr Savage suggests ten), then the eyes are closed for a like period, when they are opened and again fixed on the printed page for a like period, thus alternately fixing and relaxing the eyes for several minutes at each time of exercise We in this manner imitate the ordinary methods used in developing the voluntary muscles in other parts of the body I have not had opportunity of testing this method, but it appeals to reason

There are cases, however, that will not yield to prisms or to orthoptic training and we then have to resort to surgery It is not always easy to draw the line between operable and non-operable cases but a very practical rule, already adopted by most of us, doubtless, has been published by the editor in the *Ophthalmic Record* which is whenever the red glass over one eye shows diplopia, or there is a hyperphoria of 3 degrees or an esophoria of 10 degrees we should operate To essay an operation on a muscle to correct an insufficiency of only a few degrees, requires of the surgeon much confidence in his ability to cope with the subject in hand The methods of operating differ somewhat with different surgeons, as do also their opinions and experiences as to the results from any given method or amount Some prefer very limited and repeated division of the tendon Others prefer to gauge the operation by the result desired beforehand, and to divide just so much tendon and no more and await the result, while still others, and this is my preference, carefully divide the tendon, stopping and testing frequently until the necessary amount of correction is obtained This seems to me the only practical method, and I seriously question the claims of those who say they can produce the result of a certain amount of division of the tendon Sometimes a total tenotomy will give no more result than a very limited division of the tendon will in other cases We are all aware of this in the operation for strabismus where such varied results are obtained from a clean tenotomy Another troublesome feature in these tenotomies is, that they do not always remain just where we leave them, what shows by the phorometer perfect correction on the completion of the operation will, in the course of some days or weeks, show either an over correction or an under correction

When the tenotomy, partial or total, gives an insufficient result the opposing muscle may be advanced, but in the heterophorias we generally have little trouble in getting enough result by tenotomy with almost no risk of proptosis Some cases of heterophoria are particularly obstinate to correction Whether there be such a thing as antipathy to single vision as taught by von Graefe, or whether the hyperphoria, as Dr Stevens declares, is always the cause of the difficult fusion, is a matter yet open to discussion The following case, which came under my observation, fully tested all my ability, patience and perseverance as well as that of the unfortunate sufferer himself

Mr J M, age 33, first consulted me June 27, 1892, for diplopia and great confusion of mind, inability to think connectedly and strange, heavy sensations about his head which he ascribes entirely to the condition of his eyes He stated that in January preceding he went to St Louis to consult a prominent specialist and recognizing an esophoria he prescribed prisms for him They gave him no relief The surgeon then made an operation on the left internal rectus muscle For awhile the operation gave relief, but after some days he had exophoria The left external rectus was now submitted to an operation, and not correcting the exophoria the right was operated These are the statements of Mr M on which I have to rely for the history of the case up to this time, as the surgeon in question failed to answer my request for a copy of his record of the case

The discomfort and confusion continued until I saw him five months later At that time I found the following condition on looking twenty-five or thirty degrees to the left he had crossed diplopia With a red glass over the right eye, looking at a candle twenty feet directly in front, he saw the red flame 6 degrees to the left and 2 degrees below the white flame The rod test showed exophoria = 6 degrees and right hyperphoria = 2 degrees taken at twenty feet There was no slanting of the lines to indicate involvement of the obliques Correcting the hyperphoria with a prism did not modify the exophoria On covering one eye while both were fixed on an object, near or far the covered eye would diverge decidedly O D V = 20-70, O S V = 20-20 Correction under suspension of accommodation O D + 50 D sph ⊂ + 50 D cyl 135° V = 20 03, O S + 1 D sph V = 20 30

I made a careful tenotomy of the right external rectus, testing several times until the images were brought together

June 28 Exophoria = 3 degrees and right hyperphoria = 1 degree or less June 29 No change Divided the tendon of the left external rectus, stopping and testing frequently, and got no result until the last fibers were divided when there occurred an over correction of 4 degrees A suture was put in, drawing the muscle back sufficiently to leave an under correction of 1 degree June 30 There is now less than one half degree exophoria for twenty feet, practically parallelism July 2 Lateral balance good for twenty feet, the vertical band of light running directly through the candle flame There is a right hyperphoria = 1 degree He expressed himself as greatly relieved, his head feeling clear, the mental confusion gone, and no diplopia He went home instructed to wear glasses and return in two weeks for further examination He wrote me occasionally and expressed himself in such glowing terms of the relief he had obtained that I, as well as he, thought it unnecessary for him to again visit me In about two months his old troubles began to return and he was again annoyed with diplopia and mental confusion

October 29 Examination of Mr M showed the following condition at twenty feet esophoria = 4 degrees, right hyperphoria = 3 degree, at twelve inches exophoria = 8 degrees I now added a prism to his glasses to correct the hyperphoria, but it gave no perceptible relief November 28 Right hyperphoria = 3 degrees, esophoria at twenty feet = 1 degree Exophoria at twelve inches = 14 degrees As he complained now chiefly of inability to converge comfortably to the reading point, I decided to reduce the exophoria at the risk of causing diplopia for distance Having apprised him of this, and obtained his consent to the operation, I divided the tendon of the left external rectus, giving orthophoria at twelve inches and esophoria at twenty feet = 24 degrees He now had more or less constant diplopia, when looking off from him, but had easy fusion at twelve inches There was now manifested a right hyperphoria of 5 degrees, and so I made a partial tenotomy of the right superior rectus bringing the images to the same level The following morning the hyperphoria had returned and measured 3 degrees I divided very carefully a small lateral strand of the tendon, getting complete correction I sutured back the left external rectus, dividing the eso- and exo phoria for a distance and near about equally, giving 12 degrees of each With a prism of 12 degrees base out before one eye he had ready fusion at twenty feet December 28 Still fuses readily at twenty feet with 12 degrees prism, but the rod test shows a right hyperphoria = ½ degree There was annoying homonymous diplopia for distance, and so I made a partial tenotomy of the left external rectus, bringing about easy and perfect fusion at twenty feet December 30 The lateral balance is still preserved but there is a left hyperphoria of 2 degrees Put a suture in the right superior rectus and drew it forward slightly December 31 There is now the most perfect balance he has ever had there being orthophoria for all distances January 13 Writes that his diplopia and confusion are returning February 16 Esophoria = 14 degrees at twenty feet and left hyperphoria = 4½ degrees Made a careful partial tenotomy of the left superior rectus, frequently testing until sufficient correction was obtained The esophoria now measured only 7 degrees or a reduction of one-half February 17 There is no diplopia and the rod test shows a left hyperphoria of less than ½ degree March 18 Esophoria = 16 degrees at twenty feet, and right hyperphoria = 3 degrees the eyes having traveled through a circle and come back to about where they were in the beginning Prisms gave him no relief He was now very little annoyed by diplopia and expressed himself as feeling much better than formerly Nothing daunted I again operated, this time dividing the tendon of the right internal rectus, getting no result whatever until the entire tendon was divided and the hook swept widely This overcame the esophoria and brought the eyes to a very nice balance, the hyperphoria almost entirely disappearing after the tenotomy

May 14 Mr M has gotten along very well since the last operation, two months ago, but there is still some confusion of vision, especially for reading He has diplopia when looking to the extreme right or left due to loss of motility but this gives him no trouble as it does not come in the way of ordinary vision Examination with the phorometer now reveals a right hyperphoria = 1½ degrees, and an exophoria at twelve inches = 12 degrees, but at twenty feet there is orthophoria in the horizontal plane Correcting the hyperphoria with a prism does not influence the exophoria With the following O D prism 1½ degrees base down, prism 2 base in, O S prism 2 degrees base in he has easy and comfortable vision for reading distance As he is only now troubled with the want of converging power in addition to the vertical deviation these glasses correcting these two faults give quite comfortable vision for reading After all the numerous tenotomies on Mr M there is no proptosis and the motility of his eyes is not perceptibly diminished

What the final result is going to be one can not say, judging from the record of the case as here given with all its mutations This case also very aptly illustrates those strange nervous phenomena pointed out by Stevens and others, due to want of balance in the ocular muscles In his worst condition he could not trust his memory, and was afraid to change money in business transactions lest he should make a mistake He seriously considered having one eye destroyed as he had been led to believe, and had so reasoned with himself, that this would put an end to all his annoyance

The case was pronounced hysterical by the gentleman whom he visited in St Louis, but I am disposed to credit his ailment to the muscular anomalies, solely for the reason that whenever he made most complaint of mental confusion I always found the most troublesome heterophoria I have selected the foregoing cases to illustrate certain anomalies to the rules, as we understand them, at this stage of advancement in this comparatively new field of surgery and which, I trust, will in some small way help on to the perfecting of our methods of dealing with these very important as well as very annoying conditions

Dr Savage—I always like to give a reason for the faith that is within me, but not being able to do so in so short a time as five minutes, I must refer you to the last issue of my journal, to the two papers, one on "Rhythmic Exercise, the Proper Method for Developing the Ocular Muscles," and the other on The Relationship Between the Centers of Accommodation and Convergence" In one or the other of these papers you will find a reason for every statement that I shall make In the first place we have two forms of esophoria, true esophoria, dependent on the natural structure of the muscle or its attachment, and pseudo esophoria, dependent on the relationship between the centers of accommodation and convergence Likewise we have two forms of exophoria, a true and a pseudo

In reference to Dr Baker's case, I will say that spasm (in the true sense) of accommodation is always associated with, and dependent on, exophoria, and therefore can be cured by correcting the exophoric condition If the patient is myopic a part of his exophoria—in some cases the whole of it—may be relieved by prescribing a full correction of his myopia, but if the patient is hypermetropic a full correction, or even a partial correction of the focal error will make the patient worse by adding a pseudo exophoria to his true exophoria When the exophoria is as great as in Dr Baker's case, a part of this condition must be relieved by operation In operating on a case of this kind only the exophoria for distance should be corrected, leaving the remaining exophoria in the near to be corrected by rhythmic exercise It is always better to divide the operative effect between the two corresponding muscles It is my practice to operate on one muscle one time only, but I never divide a tendon completely in any form of heterophoria, always leaving a few fibers above and below to prevent the muscle retracting too far Exophoria in emmetropic and in hypermetropic eyes grows worse with advancing years, while an esophoria in such eyes decreases as the patient grows old

Dr LeMond—I have had some experience in the anomalies of refraction, in connection with asthenopia and a want of muscular equilibrium and in trying to establish the same by tenotomies of ocular muscles And I have come to the same conclusion as the old negro who undertook to eat the largest potato in the country, when he said "The more he ate the larger the potato got" So it is with me in regard to muscular anomalies, combined with errors of refraction, the more we cut them and the more attention we pay to the muscles alone, the greater the subject gets on our hands

I think the digestive symptom often plays a very important part in these affections In other parts of the body we might ascertain what existed that was assisting, in a reflex way, in augmenting the ocular anomalies I think the more attention we pay to the whole body, but at the same time not neglecting the eye in our investigation, the more successful we will be I think a great many of these troubles are augmented, very largely, in people suffering from nervous depression and poor digestion in connection with bad hygienic surroundings and the want of proper kind and amount of food

In females, my experience teaches me that these troubles are often associated with uterine troubles of various kinds, which are always ready to act in conjunction in pulling down the system, and so with these complicated ocular troubles, a vade mecum is formed I have quit looking for emmetropic eyes, for I believe that on a close and careful examination that we would not find one eye in one hundred to be in a state of absolute muscular equilibrium

If decided squint is absent, by no means tenotomize the muscles Exercise them with prisms, in a gymnastic sense, say ten or twenty minutes once a day, but do not prescribe prisms for constant use Correct the manifest hyperopia or myopia and the astigmatism, which, I think, you will find in nineteen cases out of twenty If the patient is under thirty years of age I give them 75 per cent of a full correction with glasses, and I think I can safely say that nineteen cases out of twenty, which have come into my hands, have been relieved

Dr J L Thompson—My experience is somewhat like that last given We are indebted to Dr Murrell for the interesting paper and classification I believe there is a very large class of these patients who can be cured, or relieved almost entirely, by the correction of refraction This will include 90 per cent or more of the muscular conditions A number of years ago when I first began practicing I corrected, as far as possible, the muscle errors by means of prisms and would get almost entire relief, and almost invariably on correcting the refractive error the astigmatism particularly would get entire relief In correcting astigmatism alone, I believe relief often comes to the patient There will be a small per cent of these patients who will have to have the muscular anomalies corrected by operation, but the majority yield to correction of refractive errors It is a bad thing to be picking at one muscle so many times I have had patients who wore the prisms for some months and not a particle of insufficiency of the recti muscles existed after two years I do not believe that a partial tenotomy ever benefited a case on this earth, but that all such reported cases would have done just as well without the operation

Dr Gradle—In the heat of discussion on the importance of muscular anomalies it is often overlooked that patients complaining of asthenopia were relieved on the whole about as satisfactorily and perhaps in as large a proportion of cases before the subject of heterophoria was ever brought out It is true that heterophoria is a very common occurrence, but if we examine persons who do not complain of their eyes we find it as well, and often in as high a degree, as in the patients who suffer from asthenopia Such, at least, was my experience as related at the last International Medical Congress Hence before we should admit any causative relation of an observed muscular want of balance, to the complaints of the patient, we should first determine whether the latter are not due to other well recognized causes, and test whether their removal will not obviate the asthenopia On analyzing the conditions which accounted for the asthenopic complaints of 500 consecutive cases in private practice, I found that in 76 per cent hypermetropia, astigmatism or presbyopia were the only and sufficient cause, as proven by the results of their correction, 5 8 per cent were clearly of nasal origin, 4 8 per cent were cured by attending to an existing slight blepharitis, 2 2 per cent depended on slight choroiditis, and in 1 2 per cent the conditions in the eye were connected with progressive myopia There remain 10 per cent not due to these causes, but depending generally on neurasthenia, as manifested as well in other functions In nine-tenths of these, the usual tests showed the muscles practically balanced Only 1 per cent of the total number showed a sufficient muscular anomaly without the apparent causes for the asthenopia, to raise in my mind the question whether the muscular strain were the cause of the subjective symptoms As I could not get any benefit in these patients from temporary exclusion of one eye which necessarily obviates all muscular strain, I did not perform any muscular operations From my own experience I have hence come to the conclusion, that asthenopia dependent upon anomalies of the recti muscles is certainly not a common condition • I can refer moreover to a common observation, which in my mind throws much doubt on the correctness of the prevalent belief in muscular asthenopia The highest degree of heterophoria is that which is not continuously overcome by the muscular effort, but in which at times of fatigue the eye actually deviates These are the cases formerly called latent squint Such patients, however, do not complain of asthenopia, or if they do it is relieved by attention to their refractive condition According to my experience these patients suffer from temporary diplopia, but not from asthenopia or other nervous symptoms

At the request of the Society, Prof Zehender stated, that as far as he is informed, partial tenotomies are not at present performed in Germany At the time when von Graefe first recommended this operation for insufficiency of the interni—as it was then called—it was performed very often by him and other oculists But it was soon learned that a partial tenotomy does not permanently alter the muscular relations, even when the primary effect seemed satisfactory, and that a permanent change could be better secured by a total tenotomy controlled by proper sutures

Dr Risley—I wish to express my gratitude over the conservative tone which has characterized the discussion of these papers In the management of the anomalies of muscular balance it is possible that in some instances too great enthusiasm and inadequate study of the case in hand has led some operators beyond the bounds of prudence Indeed I have already seen the consequences of mistakes in this direction I have under observation a gentleman suffering from incipient tabes, with impaired reflexes, lightning pains, etc, who had nevertheless had his external rectus cut for a supposed exophoria I had another patient with impaired innervation from obscure nuclear disease, which had been overlooked and the externi cut by an enthusiastic surgeon, this, too, when a careful study of the relative strength of the muscles had shown but 6 degrees of abduction and 2 degrees of adduction Fortunately no great harm could result under such conditions, but such instances demonstrate the necessity for great caution, lest the early symptoms of a nuclear palsy, or the incipient stage of tabes, which so frequently declares itself in transient ocular symptoms, should be mistaken for so called heterophoria

When attention was first called to this subject in its most modern phase, I could but wonder how I had succeeded in relieving so many people of their asthenopia, being unmindful of the reputed frequency of these anomalies of the vertical muscles and in a measure also of the external rectus A more careful study of those persons who had not experienced entire relief from correcting glasses and careful attention to general health, soon convinced me that in a certain number of cases the trouble was due to some form of muscular anomaly Within a few years I have succeeded, either by carefully adjusted prisms or by tenotomy, in greatly relieving a large number of my former patients and others Therefore while mistakes may have occurred and inordinate claims for the efficacy of tenotomy in curing diseases of the general nervous system may have been made, still I am sure there is too much of truth in these claims, and too much of real value in the careful study and treatment of heterophoria to relegate the whole subject to the realm of charlatanism

Dr Baker—I do not wish to convey the idea that there is nothing to be gained in the operations for heterophoria, in fact I make them, and possibly as often as any one here, (but not as often as some of my neighbors whom a friend of mine calls "post-graduate friends") and get good results in most cases The point I wish to make is this which are the operative cases? Not such a case as this a patient came to my office some time ago in whom a so-called oculist had proposed an operation for heterophoria, and yet the patient had one and one half D of hypermetropia which had not been corrected I gave him a pair of spectacles and his muscular insufficiency disappeared together with all asthenopic symptoms

The muscular insufficiency in this case was caused by the error of refraction, as I believe it to be in ninety nine cases out of a hundred In nineteen cases out of twenty, if we correct the refractive error we will give comfort to our patients In all, I prescribe lenses that fully correct the error of refraction and tell the patient to wear them a certain length of time, and if the symptoms of asthenopia do not disappear I then correct with prisms, muscular exercise or by an operation

Dr Murrell—I believe that this subject of muscle errors is very imperfectly understood by the majority of men in our profession I confess I knew nothing of muscle errors until within the last year I am just beginning to see light, that there is something in it there is no doubt I take a very conservative view of this subject of operation I have had patients bring their glasses back and object to taking them because they did not give entire satisfaction Until I began to search for these muscle errors I could not find what the cause of complaint was I have prescribed prisms in a number of cases lately, giving complete relief in a large portion When a patient comes to me I first correct the refractive error, and then correct the muscle error by prisms, and if this fails to give relief I perform a tenotomy Dr Savage has devised means by which we can exercise the ocular muscles, and thereby develop them The character of exercise set forth by him in a recent publication is rhythmic and must, in all cases, stop short of fatigue

The First Woman M D—Mrs Elizabeth Blackwell was the first woman in the Republic to receive the degree of M D, a fact which is once more brought into notice by the accounts of the death of her sister in-law, Mrs Lucy Stone

SOME REMARKS ON SQUINT AND ITS TREATMENT

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY J H THOMPSON, M D
KANSAS CITY, MO

To all observing ophthalmic surgeons it is evident that the common operation for converging squint is by no means perfected, and, I am inclined to think that many of my hearers are willing to join me in the belief, that, of all the operations on the eye, excepting perhaps iridectomy in acute inflammatory glaucoma, that for squint is the most difficult, and yet, there is scarcely a traveling quack or recent post-graduate enthusiast who will not tenotomize a rectus muscle, at any time, on any patient, and for any fee Some years ago I was regretting the difficulties in this operation in the company of some of the members of this section, when I was astonished to learn that, for some ophthalmic surgeons the correction of strabismus was child's play and almost beneath the dignity of an eye clinic Why is this? Because in childhood it is very easy to straighten an eye, and the immediate effect is brilliant, but in a very large majority of cases the more satisfactory the primary operation, the more disastious the remote consequences, at least, that has been my experience, not only in my own cases, but also in the cases of other operators, many of them excellent men Therefore, I take it, a short paper on this subject will not be out of place

I am much inclined to think that many people never acquire binocular vision, the visual apparatus being defective either in a want of commissural fibers between the two visual centers, or an abnormal relationship between these centers and the psychical areas in the cerebral cortex It requires no greater stretch of the imagination to believe this, than to say that Daltonism depends upon a deficiency of certain color fibers in the optic nerve or brain I do not mean that there is an antipathy to single vision, but that single vision is impossible, because of the inability of the individual to join the two cerebral pictures Thus if binocular vision is not acquired, *diplopia is a natural* condition and does not lead to any embarrassment of sight, because the condition can not possibly be compared to binocular sight, of which the subject has no conception

Not many days ago I examined a man 30 years old He had alternating converging strabismus, in each eye tested separately, his vision was 20 18, he would use either eye, if he looked at an object to the left of the vertical plane, he would use the left eye and squint the right, if to the right of that plane, he would use the right eye and turn the left No combination of prisms or colored glasses could excite diplopia The man was hyperopic 2, 5 D In this case the individual suppressed the visual field of the eye not in use at the time as is evidently the case in birds and fishes I have seen the same in young children with beginning squint

Although there are reasonable doubts of the truth of this idea, it can not be denied that some children are born with defective vision in one eye This congenital amblyopia will be discovered, if sought for, in very many, I may say the majority of children with beginning squint at a time of life when it can not be reasonably supposed that the partial blindness is the result of disuse I have found this defect even in periodic squint, and in my experience it is so common that I consider it the rule rather than the exception, and that it is the predisposing cause of squint in many cases That hyperopia is an exciting cause is evidently true, but we all know that young hypermetropes can overcome a high degree of refractive error without fatigue of the ciliary muscle, and are seldom called upon to assist accommodation by convergence Hypermetropia even when combined with monocular amblyopia is hardly sufficient in itself to cause strabismus, because if we render the eye emmetropic with glasses, even at the time of periodic squint, there is no certainty that the deformity will disappear, and although some writers insist on such conservative treatment, the results are not satisfactory I have tried it and I have not yet found the method successful It is for this reason that there are some doubts of the correctness of Donder's teaching

What relation the angle Y has to strabismus convergens and the influence the superior and inferior recti muscles have over squint is not fully determined, but it does seem to me that often the external recti muscles are not able to hold the optic axes parallel, especially since we know that the center of rotation lies outside of the vertical muscular plane, or the plane of the superior and inferior recti muscles

This may in some persons be overcome, as in adults we find a high degree of prism can be borne in time, while in the beginning small angles excite diplopia If from a high angle Y, or increased accommodative tension of the interni, the externi are fatigued, the eye tends to turn in, the child preferring monocular vision in comfort to binocular sight with pain Again, there is another tendency to latent convergence, and that is that the center of rotation lies on the outside of the plane of the superior and inferior recti muscles In health the tendency to rotate inwards is balanced by the action of the obliqui, so if from any cause, nuclear perhaps these muscles fail in their duty, the external recti fatigue, give way, and squint results

At an early date in my professional career, I felt convinced that it was not alone the tension of the internal recti muscles which held the eyes turned inwards in confirmed squint I thought then, as I do now, that all the muscles which rotated the eye inwards played an important part, for it does not seem reasonable that a secondary contracture should alone attack the interni and leave the superior and inferior recti muscles intact It is safe to consider that these two muscles are involved also in the pathological changes which go so far to hold the eyes crossed It is only another step in advance to affirm that all the structures in the orbit, immediately surrounding the eye have altered their relationship to correspond to the false position of the eyeball, and of all such structures the capsule plays the most important part

From the above, it is evident that the operation for squint is by no means such a simple procedure as many would wish us to believe, and that when a surgeon undertakes to correct the optic axes, he has a case before him which may require for its successful issue a most critical examination into its cause, a careful study of its condition and a most minute dosage in any operation that may be undertaken As I have said before, it is not difficult to straighten the eyes, but it is difficult to guard against failure, since the eyes may turn in again, or in time go out the other way The conservative treatment advanced by our confrere, Dr Ayres, has many supporters throughout the United States It can not be denied that the continued wearing of glasses may cure some cases, but if I am not mistaken, the method is less satisfactory than the surgical means at our command It has this advantage, however, it can be tried at a time of life when all operative procedures are to be condemned I am not in favor of prescribing glasses for very young children, and I always feel when I see a baby in spectacles that theory has run off with common sense

In squint depending upon simple hyperopia, when the vision of both eyes is good, binocular vision may be secured by a simple tenotomy and the wearing of correcting classes, providing the patient is less than thirteen years old and more than seven For reasons well understood, in making a simple tenotomy the operation should be divided between the two eyes, and the cutting of the capsule should be in proportion to the degree of convergence Stevens' method of modified tenotomy has immensely simplified this operation and makes it possible to accurately gauge the effect Some of us are in favor of rotating the eye outward with a stitch, but I am afraid that this stitch has done more harm than good, for between the eighth and thirteenth year the stitch is rarely necessary, and if the operation is made on one eye at a time for full correction, it is positively harmful I think it is better to under correct than over correct, for I see no objection to a second operation, or indeed a third, while insufficiency of convergence is to be deplored, downright divergence is shameful

In cases where there is no hope that binocular vision can be attained, either because of well marked monocular amblyopia, or other causes, I believe it is best to combine tenotomy with advancement, which should be always capsular with or without division of the external tendon This operation should not be undertaken on a patient under thirteen or fourteen years old Why I favor advancement of the capsule is for the following reasons in long confirmed squint we usually have contracture of the internal recti and other adductor muscles, together with stretching of the externi This muscle is therefore relatively weak and may not be able, unsupported, to overcome the tendency of the eye to roll inwards, even after the tense structures are cut So, there is danger that the muscle is advanced too much and that the capsule on the inner side of the eye is too extensively divided Therefore to divert the eye with a limited tendo-capsulotomy requires too much pulling on the part of the advanced muscle, and after the stitches are removed, the new formed adhesive tissue may give way To advance a muscle requires considerable dissecting, pulling with forceps and tearing with hooks, which add greatly to the possibility of infection, and since it is advisable to do this work without a general anesthetic, using cocain alone, the operation may be unduly painful

In old cases of squint after the thirteenth year, I advance the muscle with the capsule, either operating on one eye and dividing the internal recti of both, or tenotomizing and advancing on both eyes This operation has always been successful in my hands and I have not been compelled to try any one of the many methods suggested by authors or extolled by pamphleteers

The reason why I like this operation, whether the tendon be cut or doubled up as suggested by De Wecker, is that the relation of the tendon to the capsule is not disturbed, and the adhesive inflammation consequent to a rather extensive wound of the capsule and conjunctiva binds the parts so tightly to their new position, that there is no danger of their giving way, even when the stitches are removed on the third day Some may fear that the tension on the threads in this operation may tear them away, but since I make my stitches above and below the cornea, passing a flat needle through the episcleral tissue and perhaps the superficial layers of the sclera itself I have not known that to happen I endeavor to place the stitches so that the converging superficial threads when tied make tangents with the cornea and do not touch its epithelial surface, avoiding irritation if not ulceration I prefer a waxed thread, and when about to tie the muscle forward, I twist the corneal threads so that the point of convergence marks the position of the knot, thus accurately dosing the degree of advancement and foretelling any injury to the cornea after the knot is tied

DR SAVAGE—In order not to kill time I will make a few statements, and for the reasons on which these statements are founded I must again refer you to the last issue of my journal One of two things must always be at the bottom of internal squint, viz intrinsic esophoria and pseudo esophoria In most cases the two coexist Other conditions, such as a corneal scar or an amblyopia are often associated with these causes Hypermetropia, the cause of pseudo-exophoria, nearly always is found in cases of internal squint True esophoria is rarely so great that the guiding sensation can not restrain it, but when a pseudo esophoria is grafted into it, the two combined throw off the mastery of the guiding sensation and there results a *turning* where before there was only a *tendency* The two forms of esophoria may be restrained by the guiding sensation for a long while (in most cases for a lifetime) when something disturbs the nerve centers and the esotropia occurs, the guiding sensation having lost its control In all cases of internal squint the first thing to be thought of is the destruction of the pseudo-esophoria This is readily effected by a mydriatic, the first effect of which, however, is to increase the squint by increasing the pseudo-esophoria The pseudo esophoria having been cured in this way, the true esophoria may be again brought under the control of the guiding sensation, the eye swinging itself suddenly or by degrees into line In very young children the mydriatic is often enough to effect the straightening of the eyes In older children the hypermetropia should always be corrected to the fullest

The correcting lenses unaided by the mydriatic, in some cases will cure the squint by removing the pseudo esophoria, but in many cases the mydriatic must be made to aid the lenses because of a disposition, continued for a longer or shorter time, on the part of the eyes to cross when an attempt is made to fix on the near point When squint is thus cured there always remains the true esophoria which at some time may have to be treated either by rhythmic exercise or partial tenotomies But the great majority of these cases of internal squint are brought for treatment at a time when mydriatics and lenses can not effect a cure The balance must be done by tenotomies, complete when necessary partial when possible In all these cases the fully correcting convex lenses should first be determined, and an estimate be made as to how much of the condition they will relieve Then as little cutting of tendon and capsule should be done as possible

Dr J L Thompson—I had a patient a little child only three months old, who had strabismus in one eye only By using the atropin I straightened her eyes I have had patients where the eyes turned in a good deal, in which I have used the mydriatic and glasses as early as the eighteenth month, who were very much benefited In other patients I have operated on the muscle and have had success In a certain number of cases we will never be successful by all the operative measures that have ever been devised The only thing to do in these cases is to watch them You will operate on a patient, getting beautiful results and ten years later you will have something that will not suit you at all—the eye turns the other way These patients we feel like sliding on some one more sanguine as to results We had better never have had anything to do with them Concerning the question of amblyopia, I will say that I am satisfied that there are numerous cases where there is more than heterophoria that causes strabismus

Dr Hotz—I agree with the main statements of the author, and wish to make only a few remarks on the subject of advancing the muscle, inasmuch as I prefer the resection to the advancement of the weak muscle I divide the tendon of the muscle, leaving a short stump at the line of insertion, then cut off a piece of the tendon, in proportion to the degree of convergence, and attach the muscle to its original place by stitching it to the stump We gain several points by this method in the first place we can gauge the effect to a certain extent by the size of the resection, we are sure we have a firm hold for our stitches, and they will not slip as they are so apt to do when they are run under the conjunctiva only, we furthermore know that the muscle will be held to the eyeball in exactly the same line that it was originally attached But whether we do advancement or resection the operation should always be accompanied by the tenotomy of the contracted internal rectus muscle

Dr LeMond—If we were all of one mind in this department and never differing with each other, it is quite likely that ophthalmology would never have reached the stage of perfection and exactness that it enjoys to-day, but I must say that atropia in my hands has not been satisfactory, in fact, I rarely ever use atropia in connection with these kind of cases In 98 per cent of the cases of squint I have operated on in the last year (about fifty cases) I have had a decidedly unsatisfactory result in one case I invariably find in these cases a vast amount of hypermetropia, and I really believe that in nearly all of these cases of squinting eye hypermetropia is at the bottom of it After the operation I correct the error of refraction and tell these patients that they will have to wear glasses from six to twelve months perhaps, but likely by that time they will be able to go and see comfortably without them This course of treatment, with me, has been very satisfactory In two cases I had to use the stitch to hold the eye in situ I only do this where a complete tenotomy of the muscle has failed to put the eye on the same visual axes with its fellow I prefer using the stitch to doing repeated tenotomies I think the amblyopic condition is due largely to a great amount of hypermetropia In my experience I have found the amblyopia confined to the squinting eye I believe whenever we look more carefully to the eyes of school children the less squinting we will have simply by applying the needed remedy, that of prescribing glasses Statistics show that the Germans double and treble us in the number of glasses worn, according to the same given number of population I think this proves to us, very conclusively, that they are just that much ahead of us in finding the early errors in refraction and correcting them

Dr Gibson—I want to make one remark only, in favor of the advancement that has been spoken of It does away with that protrusion of the eyeball which we have as a result of a simple tenotomy That I think a very essential thing to take into consideration I have seen this protrusion quite marked in some simple tenotomy operations Combined tenotomy and advancement certainly gives better results

Dr Risley—Do you measure the adduction by the image of light on the cornea?

Dr Thompson—Yes, sir

Dr Thompson—I am much pleased with the interesting debate on my paper regarding the amblyopia of squint I have been surprised to find in children two or three years old, the bad vision in the deviating eye, when that eye had only squinted a few days, certainly not long enough for the sight to fail from disuse From such experience and from the tone of some ophthalmic writers I am inclined to think there is a great deal of doubt about the truth of amblyopia exanopsia Children born with cataract and successfully operated upon some years afterwards do not as a rule show up blindness If the effect of disuse be true in one class of cases, why not true in the other? The use of atropia in children for the correction of squint is not so far as I have been able to observe satisfactory I have tried it for months and do not know that I ever succeeded If the squint is entirely due to hypermetropia I think it may be overcome by glasses Indeed all such methods should be tried before resorting to an operation I have relieved squint in boys of 15 and 16 years of age by correcting the hypermetropia, for when the glasses were taken off the squint would return I have never seen a case of strabismus corrected in a young child by operation but that when the subject grew to be 15 or 16 years old there was loss of convergence or direct divergence I have operated on children and got the most magnificent results, but when they grew up to adult age I was ashamed of them and myself too

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EXOSTOSIS OF THE ORBIT

Read before the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association at Milwaukee

BY ROBERT FIELDS LE MOND, A M, M D

PROFESSOR OF DISEASES OF THE EYE AND EAR IN GROSS MEDICAL COLLEGE DENVER COLORADO

When I received a letter last fall from the president of the ophthalmic section of this distinguished body, requesting me to contribute a paper on this occasion, I immediately began to cast about for a subject upon which to write In the selection of a subject I had three objects in view, viz

1 One in which great need existed for its further development to a more successful and satisfactory termination, both to the physician and patient

2 One in which there was sufficient gravity to claim the attention, interest and hearty cooperation of every ophthalmic surgeon present

3 One in which I very much needed to be enlightened upon, myself, for I believe it was Archimedes who said "If you desire wisdom, acknowledge your ignorance that your teachers may know where to begin"

I therefore present to you, the great godhead of ophthalmology, the subject, "Exostosis of the Orbit," a morbid condition which has successfully baffled the best skill that is known either in medicine or surgery to-day, because statistics show that over 60 per cent of the cases which have been reported have succumbed, either to septic meningitis or pressure upon the brain following the operation, and it is our duty, as benefactors of the human race, to make a great and united effort to overcome any evil which is claiming victims among our kind at the rate of from sixty to seventy out of every one hundred it attacks

I think it is generally accepted as a fact by most writers upon the subject that three forms of exostosis exist 1, the cellular, 2, the craggy or semi-cartilaginous, 3, the ivory

The cellular exostosis is characterized by its being composed of an osseous crust, which surrounds a rather soft substance that is thoroughly supplied with a bony framework resembling the honey-comb somewhat, and it is thought originates from the periosteum This form of exostosis rarely ever attains any great size and is disagreeable only on account of its cosmetic effects, as it never gives pain unless interrupted by a blow or pressed unnecessarily

The semi-cartilaginous, or craggy form of exostosis, is composed of layers of craggy bone often interlaced with cartilaginous particles, as well as surrounded entirely by cartilage, and particles of periosteum may be traced about the tumor, but it does not make a complete covering and is found in patches only This form of exostosis is more apt to attain a greater size than the cellular, it offers but little resistance to the surgeon and usually makes a good recovery Many cases have, however, been reported which proved fatal, but it does not compare in point of mortality with the third class of exostosis, which I will now describe

The third class is the ivory exostosis, which is by far the most formidable of all the osteomata yet described by any writer upon the subject It is excessively hard and consists of perfectly developed, and very fine bone tissues According to McKenzie, it originates in the diploe, presses the compact tissue of the bone before it, and forms a round, smooth and somewhat nodulated tumor There appears to be one general characteristic of this growth, and that is, it seems to have an affinity for extending into the brain Most cases which I have seen reported, in which an autopsy was held, show that the intracranial division was developed more rapidly than the outside portion

Regarding the etiology of exostosis of the orbit, comparatively little is definitely known It often supervenes upon periostitis or ostitis, and is thought by a number of writers to be of syphilitic diathesis, as a positive knowledge of syphilitic complications has been shown in a number of cases reported Other cases have been known to have received blows about the eyes which have been given the credit of the exostosis, while still other cases have received falls of various kinds, ranging from early childhood up to 25 or 30 years of age, and a number of cases have been found to have fractures of the bones of the orbit As, however, this disease appears about equally divided between the sexes I think the theory of falls and blows plays but a small part, for what boy has not fallen times beyond mention and narrowly escaped death, time after time, from blows of various kinds and intensities? They would not be boys were not this the case, so I think this practically excludes one of the prominent causes referred to by most writers Again, it is thought by others, that the osteoma is due to a diseased condition of the frontal or ethmoid bone, or of the frontal sinus, and that the parts mentioned are possibly wanting in some of their elements Others, again, advance the idea that it is possibly due to digestive disturbance or a want of proper assimilation and appropriation of the elements of food matter, that the superabundance of alkalin reaction being present, the system is filled with bony material and thereby develops the osteoma in seeking an outlet

These osseous tumors are usually very hard to the touch, showing, even at an early stage, a remarkable amount of resistance They are usually slow in their development and it is something unusual for any pain or inflammatory action to be present, though in a few exceptional cases much pain has been experienced

The degree of exophthalmus, impairment of vision, rotation, and general movement of the eyeball will, of course, be entirely dependent upon the extent and situation of the exostosis

According to the best authorities, in the early stages of this trouble the treatment should be the promotion of all means of absorption by the internal administration of pot iodid, and a thorough saturation of the tumor locally with mercurial ointments The patients' general health should be looked after closely and not allowed to become depleted or run down, they should be supported by good, generous diet, and encouraged to travel or reside in the country If the tumor is small and giving no special inconvenience and appears to be merely existing without any apparent activity, it should not be disturbed but quietly let alone But when we find by watching the case for a time that the osteoma is gaining on us, I think the surgeon should not hesitate to advise an operation at once

A very large per cent of exostosis occurs in persons under twenty-four years of age In some cases it has been discovered in babes as young as one or two months old, and in one case was found to exist at birth But a large majority occurs between the ages of ten and twenty years, and attacks about one out of every thirty thousand cases of eye trouble Bornhaupt collected eleven cases of exostosis of the orbit which were operated upon, and out of that number, seven died of septic meningitis (63 per cent), two cases recovered, and two were lost sight of and the final results of these operations were never obtained Berger and Tryman collected nine cases which were operated upon, six of whom died (66 per cent)

The mortality does not appear to vary to any great extent in all the collected reports I have been able to examine, from the recorded experience of some one hundred authors in this department of surgery, the average mortality will be some 65 per cent I thought it best to be brief and not weary you with tabulated reports, and will now go on to describe a very unique case which was referred to me recently by Prof W H Davis of Denver

Mr R, aged 24, a very large and well-proportioned man weighing 190 pounds complained of double vision and a blurring of the right eye, in addition to the above symptoms there was also quite an enlargement on the lower orbital bone of the same eye, it was continuous with the lower orbital bone throughout its whole extent It also extended upward nearly three quarters of an inch, and backward continuous with the floor of the orbit to near the optic foramen, the enlargement at this time was about the size of a pullet egg He had quite an exophthalmus which pointed upward and outward The line of vision in the right eye was at an angle of about 35 degrees from that of the left eye. There was little or no inflammatory action present, nor had there been at any time since the beginning of the enlargement, which the patient said was about twelve months before. He said it had never given him pain, or troubled him in any way except by causing the defect in vision and a continuous diplopia. His vision in the right eye, at this time was 7-20. He was raised on a Missouri farm, and gave an excellent family history, having never had any serious sickness in his life. His parents were both living, as well as several brothers and sisters.

The ophthalmoscopic examination showed no organic change, but there was a slight tortuosity of the blood vessels of the retina. There was positively no tuberculous or syphilitic diathesis in this patient's family history. I had him visit my office continuously for several days until I was thoroughly satisfied that my diagnosis was correct. I told him that I was sure that, at the past rate of the development of the tumor, we would very soon be forced to do one of two things: chisel off this bony mass which was encroaching so rapidly upon the eyeball, or perform enucleation. After advising with some of the members of his family who had accompanied him to Denver, he decided upon the former, and on the 17th of December, 1892, I performed the operation with the assistance of Dr. Coover.

The patient being completely anesthetized, I made a horizontal incision, commencing about six lines below the internal canthus and extended it to a little beyond the external canthus, cutting entirely through the integument down to the periosteum. I then dissected the flap up, until it could be laid back upon the superior orbital bone, which was held by my assistant. I then dissected up the periosteum and began chiseling into this bony mass, and I very soon concluded that I was pretty much in the same condition as the old pioneer, who wished for some one to help him turn the wildcat loose, as I could see by the way it completely annihilated the edges of all my chisels that I had a hard job on my hands. I took a very small chisel and succeeded in drilling several small holes into this bony mass, then by means of bone pliers connected these holes, which gave me a leverage, by which I was enabled to pry off a number of pieces, thereby reducing this bony mass about two-thirds of its size. I then attempted to pry another piece out of the floor of the orbit, knowing that it would add very much to the utility of the eye, but in this effort I was completely foiled, as it was so unyielding that I felt if I brought to bear any more weight on my pliers I should certainly burst through, and possibly put my patient in a condition to need an undertaker instead of a physician. So we decided that it was wisest to proceed no further, as we felt that the operation so far would be in a measure successful, having reduced the tumor at least two-thirds of its size. I then dressed the wound antiseptically, using a bichlorid of mercury solution, 1-5000, about as hot as it was comfortable to bear, giving the wound a thorough drenching. I then drew the flap down and bound it in its former position with about half a dozen stitches, then bandaged his eye, ordering the nurse under no circumstances to disturb the bandage until I saw the patient the next day. The patient rested very well that night, and felt fairly comfortable the next day. There was quite an inflammatory reaction of course, but this soon subsided and the healing process went steadily on to complete recovery, leaving scarcely any scar. After seeing him every day for about one week, I dismissed him, telling him, however, to call occasionally and let me see how he got along. He visited me occasionally for about one month. By this time there was comparatively slight variance in the eye from its fellow, the diplopia was completely gone and his vision measured 20/30 in his right eye, and believing that I could render him no further assistance, I dismissed him finally, feeling that I had every occasion to be thoroughly satisfied with the result obtained.

Dr. Knapp.—This is certainly a disease which is extremely important. The majority of these tumors are in the upper-inner part of the orbit, and spring from the frontal sinus. A goodly number are on the nasal side of the orbit and originate in the ethmoid. I had a patient on whom I operated for a tumor of this kind four hours, and got out only a small portion of the tumor itself. That man had attacks of meningitis and died eleven weeks after the operation. The tumor formed in the frontal sinus and penetrated into the skull. Such cases you see in large pathological museums, especially those in London. Hence the former advice: leave these tumors alone. I operated on a gentleman, age 44, about thirteen years ago. The tumor was larger than a walnut. I got it out by the method which Maisonneuve followed in removing a large intranasal osteoma, viz.: by subperiosteal enucleation. It took me a whole hour. The patient made a rapid recovery without suppuration. He is living, healthy, and no one now could discover from which orbit the tumor had been removed. The method is essentially followed in the removal of all growths, not by attacking and removing them piecemeal, but by shelling them out from the neighboring sound tissue. It has done me good service, particularly in cases of ivory exostosis of the orbit and the external ear canal.

Dr. Jackson.—The case I reported last year has continued well, so far as I know. In that case I think it was a necessity, in order to remove it without enucleating the eye, to divide the tumor before trying to take it out. It was of excessive hardness, but after breaking several instruments I found that it could be pierced by a hand drill.

Dr. Allport.—In this connection, I would say that I had a case of exostosis of the meatus some time ago that I successfully removed with the dental engine, not with the drill, however, but with some sharp burrs. The burrs became dulled occasionally during the operation, and had to be replaced by others that were new and sharp. I simply commenced burring at the apex of the tumor, and continued smoothing away the growth until the level of the meatus was reached. I have also used the dental engine in the same way, in some mastoid operations, and consider it an excellent method of operating when the burr is used and the bone substance gradually thinned away until a generous opening is produced. It is much safer than either the mastoid drill or chisel for obvious reasons.

Dr. LeMond.—We are very much pleased to have Prof. Knapp present with us and I feel complimented to have him discuss my paper. As I went over carefully his recorded experience I found it more extensive than any surgeon's in the United States on exostosis of the orbit. I am very much pleased to have heard what he had to say. In the last few months I have done two operations for exostosis of the external auditory canal. I had begun to think that perhaps I had better change my title and set up altogether for diseases of this character. I did both of these operations by means of a dental engine and a small chisel. One of these cases, a gentleman 36 years old, told me this exostosis had been forming for about five years. It had completely occluded the external auditory canal and rendered it almost impossible for the ceruminous discharge to be removed I took pieces of this bone to a professor of pathology and had it examined, but it was found to be nothing but the ivory character of the exostosis

I beg pardon, Mr President, for having digressed in mentioning the exostosis of the external auditory canal, and would not have done so had not one of the gentlemen, in discussing my paper, introduced the subject I was glad, however, the gentleman referred to it because it is a subject in which I am very much interested, and more especially at this meeting was I anxious to hear it discussed, from the fact of its being such a rare affection that it is a hard matter to get information regarding its characteristics I have enjoyed the discussions of this hour, and was anxious to be enlightened upon this rare field of surgery

I desire to thank Prof Knapp, especially for the kindly manner in which he handled my paper

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OPTIC NERVE TROUBLES ACCOMPANYING OR FOLLOWING FEVERS, ESPECIALLY TYPHOID FEVER

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY JOSEPH A WHITE, A M , M D
RICHMOND VA

I must apologize in advance for the paper I here present to this section, but I do so because I want to awaken a discussion on a subject in which I am deeply interested, and may thus be a poor means of obtaining a good result, on the somewhat equivocal ground that 'the end justifies the means" In my experience I have met with many cases of optic nerve atrophy that followed so closely on typhoid and other fevers, that there is every probability they were the result of the pathological conditions attending these diseases Whether they commenced as optic neuritis, which could be ophthalmoscopically demonstrated, or whether they followed on post ocular alterations in the optic nerve without ophthalmoscopic symptoms could not be determined But in all probability there was neuritis, or compression with or without papillitis, followed by atrophy

We all know how difficult it is to settle a question of this kind, without regular systematic investigation, by examining a series of such cases during the attack of fever Post febrile amblyopia or optic nerve atrophy might be due to brain complications, or to general systematic exhaustion following the disease, or more rarely to excessive use of quinin in treating some fevers But may they not also be the result of neuritis, or of compression of the nerve due to the pathological alterations brought about by the specific virus of such diseases as measles, scarlet, typhus, typhoid, malarial and other fevers? If this should be true, would not an early recognition of the eye trouble save, by prompt treatment, many an eye that would otherwise be lost? It has not been very long back, that so little attention was given to the ear trouble accompanying scarlet fever that many a person lost hearing or life or both as the result of this oversight Has not the investigation and teaching of the aurist on this subject been productive of great good, saving many a person's hearing, and life as well?

That text-books say little or nothing about optic nerve troubles accompanying or following fevers, that the literature on the subject is very meager, proves nothing, except that no one has investigated it systematically or scientifically It only shows that this is one of many open fields for research that may repay the labor More eyes are lost from atrophy after febrile affections than one would suppose from reading the available literature about this matter There are few of us who have not seen such cases

In looking up the subject, I wrote a few lines to about thirty ophthalmic surgeons scattered over the country east of the Rocky Mountains, asking their experience and enclosing an addressed envelope for a reply Twenty-two of them sent in a prompt and courteous answer, six (Drs Knapp, Burnett, Noyes, H W Williams, Gradle and Savage) said they had little or no experience in optic nerve troubles in cases of fever, one (Dr Calhoun), that he could not recall his cases of this nature, but was satisfied his record book would show he had met with them, Another (Dr Hotz), that his record would show cases of neuritis and atrophy, supposed to have been due to typhoid fever, although he did not consider such cases valuable for statistics Dr Risley wrote that he had seen cases of atrophy following spells of continued fever diagnosticated as typhoid, and also one case of neuritis after measles, Dr J L Thompson has observed atrophy of the optic nerve following typhoid fever, Dr Ed Jackson wrote that he had seen cases of post-neuritic atrophy ascribed to typhoid fever, but careful questioning as to symptoms gave him the impression that the cases were either cerebro spinal meningitis, or typhoid fever complicated with meningitis, Dr L Kipp has met with cases of atrophy after typhoid

Dr Michel said the cases of optic neuritis seen following so called typhoid fever were more probably due to meningitis, Dr Charles Stedman Bull wrote that he had observed many cases of optic nerve trouble in fevers, but had not time to go over his cases in detail, Dr Oliver wrote me nearly the same thing as Dr Bull, but said he would send me notes of his cases, Dr L Connor has never seen neuritis, but has seen atrophy ascribed to typhoid fever and which was probably the result of the pathological conditions that obtain in the fever, Dr Eugene Smith has had several cases of atrophy after fever, but never had a chance to examine a case during the attack, Dr de Schweinitz has seen one case of slight superficial optic neuritis in connection with malarial fever In another case with double optic neuritis in a colored girl supposed to have typhoid fever, the autopsy revealed tubercles in the meningitis, and the meningitis was probably responsible for the neuritis In two other cases he has seen choroiditis and secondary atrophy of the optic nerve after typhoid fever, Dr P D Keyser has seen very few cases of optic nerve trouble after typhoid fevers, but has met with atrophy after typhus Dr Alt has never seen real and lasting atrophy following fever alone, Dr Samuel Theobold has never seen pure optic neuritis following typhoid fever or malarial fever, but has notes of a case of choroido retinitis (and probably neuritis but the media were too cloudy to determine this point) which developed on the seventh day of a severe case of typhoid fever in a child who died three days after the eye symptoms were manifested, Dr Wurdeman has seen cases of optic neuritis as a result of typhoid, scarlet and other fevers where there has been meningeal complications, and they were followed by more or less atrophic degeneration A remarkable exception to this experience was a case of cerebro spinal meningitis, which became perfectly blind and showed symptoms of optic atrophy in November, 1892, yet in January 1893, began to recover vision and by the end of March it was entirely restored

Now this consensus of opinion goes to show that optic nerve troubles accompanying or following fevers are commoner than supposed Foerster (in Graefe-Saemisch) speaks of atrophy of one or both nerves following typhoid fever, Gowers (Medical Ophthalmos p 279) says "Loss of sight has been many times observed during convalescence from typhus or typhoid fever, and subsequently atrophy of one or both nerves In some cases when the eye affection was early observed optic neuritis was found Commencing atrophy may be observed without proceeding inflammation, or double neuritis may be present," Hutchinson (Ophthal Hosp Rep ix p 125) recorded the case of a boy whose sight failed after a fever with typhoid symptoms, and of a sister with a similar condition Symmetrical neuritis was found in both, Dr Stephenson recorded (Transact Ophthal Soc Vol viii 1888, p 250) a case of double optic neuritis after measles, when there had been no sign of meningitis, Dr Wadsworth (Trans Ophthal Soc 1880, p 125) has recorded some interesting cases after measles, Betke, Phlueger and others have observed neuro-retinitis in scarlet fever

Loring (Textbook of Ophthal Vol ii p 203) speaks of neuritis in connection with typhus, typhoid and other febrile disturbances But adds that when it occurs in cases of fever, especially where there is delirium, that there is reason to believe there is meningitis with the fever This statement, however, does not accord with the known pathology of typhus, typhoid and most other febrile affections Meningitis is a very rare complication Sir Wm Jenner never saw it in typhoid fever According to Osler in the 2,000 Munich cases it was only observed eleven times Head symptoms are not always a sign of it We can have delirium without meningitis Arteritis with embolism is oftener found, and thrombosis still more frequently

On account of the rarity of meningeal complications in typhoid fever, and still seeking to make meningitis responsible for the neuritis, both Leber and Stellwag Von Carion suggest that when neuritis is present, cases of meningitis have been confounded with typhoid There is no necessity to look for meningitis to explain the presence of optic neuritis or optic nerve compression with or without papillitis, because in nearly all cases of typhoid there is more or less cerebral congestion with serous effusion into the arachnoid cavity, lateral ventricles and subarachnoid space, sufficient explanation, on Schmidt's or Parinaud's theory, of optic nerve changes Moreover it is well known that neuritis may occur as an idiopathic affection, with great obscurity as to causation, unless we can refer it to some vasomotor disturbance

In this connection, allow me to present three cases from my record book, all of which may be of interest

1 A case of optic neuritis after typhoid fever that recovered

2 A case of atrophy after typhoid that has steadily improved under treatment

3 A case of perfect blindness after malarial fever which recovered perfect vision

Case 1—Miss E W, called to see me in September, 1885, complaining of absolute inability to use her eyes She was just recovering from an attack of typhoid fever which was of short duration, was not very severe in type and not attended by any marked head symptoms Accompanying the difficulty of vision there was considerable photophobia Examination showed marked neuritis The swelling of the nerve measured one dioptric I attributed neuritis to the effect of the pathological alterations in typhoid fever I put her on iodid and bromid of potash, used dry cups to the temples because her health had not been entirely restored I saw her occasionally during October, November and December Her treatment during this time was directed to building up her general health and getting rid of any inflammatory changes about the optic nerve and the papilla At first she made such little headway towards recovery that I feared optic nerve troubled might be followed by atrophy, but she began to improve, although she had not recovered entirely when she left me in December

In October, or a month or so after she came under my treatment, her family were so much worried about her condition that I proposed a consultation, and their family physician selected an oculist in another city, who was a well-known member of the Ophthalmological Society, and without any suggestions on my part, or without being aware of my diagnosis, he came to exactly the same conclusion, that it was a case of neuritis with considerable swelling about the papilla She left Richmond in the early part of 1886, and in March of that year called to see me, and stated that she had been entirely relieved, simply by the adaptation of glasses fitted by an oculist whom she consulted and who told her that she not only had no neuritis then, but that she never had had any That the trouble was entirely due to the astigmatism, and would disappear, and there would be no return of it if she wore her glasses I examined her and found that she had no trace of neuritis remaining, it had entirely disappeared and the nerve was normal

Now, in this case I might have accepted the dictum of the gentleman who put the glasses on her, had it not been for two facts one was, that it was not a simple congestion and blurring of the disc, but a swelling from three quarters to one dioptric Her condition when I first saw her was such that it might be denominated "woolly disc" The second fact was, that on March 24, 1882, three years and a half before she had the typhoid fever, the same lady had been a patient of mine, and on turning to my record book I found this diagnosis "Nerve congestion, asthenopia, astigmatism against the rule R E, 0 50 Dc ax 90 deg L E, 0 50 Dc ax 60 deg" At that time the cloudiness about the optic nerve and the asthenopia disappeared after the glasses were adjusted I was therefore in a position to recognize in this case the difference between an apparent optic nerve congestion accompanying astigmatism, and a true neuritis which developed after typhoid fever Had the gentleman above referred to been aware of these facts he might have been more charitable in his remarks In this connection it may be of interest to note the fact that her brother had also neuritis following typhoid fever eleven years previously He was taken sick on June 6, 1874, at 17 years of age The fever continued eighty days The attack was very violent characterized by delirium, coma, etc when at its height The diagnostic symptoms were the regular rise and fall of temperature pain and tenderness in the right iliac region, rose spots, typical tongue and diarrhea with yellow ocher stools When convalescing, had trouble with his eyes, which were examined by Dr Howell Thomas an oculist of Richmond, who stated he found neuritis, shown by "woolly discs" This report I received from Dr John N Upshur, a prominent physician of Richmond who attended both cases, and from this report I should not consider he has confounded meningitis with typhoid fever

Case 2—R H S , age 28, of Clifton Forge, Va , was sent to me by his physician on April 24, 1893, for treatment of his eyes which had become defective during an attack of typhoid fever, commencing July 4, 1892, and from which he did not fully recover until October, 1892, nearly four months His sight continued to grow worse in spite of his steady improvement in general health When I first saw him, both optic nerves showed decided atrophy of the discs His vision was right 5 200, left ½ 200 I put him on strychnia sulp and dil phosphoric acid, grains two to the ounce He commenced with 10 drops of this mixture after meals, and increased one drop each dose without showing any toxic symptoms until he was taking 52 drops, or one fifth of a grain of sulphate of strychnia at a dose On May 4 vision was, right, 12-200, left 5-200 , May 10, right 14-200, left 12-200 , May 13, right 16 200, left 14-200 , May 18, right 20 200, left 17-200, which indicated a steady improvement, as the right eye had four times as much vision and the left thirty-four times as much as at the first examination three weeks previously The type was changed at each examination so that he could not bring his memory to aid his sight and give false results When he reached the dose of one-fifth of a grain three times daily he showed decided toxic symptoms, when it was reduced to one-seventh of a grain, and he still continues the treatment

The case is interesting, both as one of white atrophy following typhoid fever (originating probably as neuritis or papillitis), and as a case of atrophy that made steady improvement under treatment, although he had been nearly blind several months

Case 3—Nellie Kilmartin, age three and a half years, was sent to me October 11 by Dr John Herbert Claiborne, Petersburg, Va She was perfectly blind in both eyes, could not distinguish a bright electric light in a dark room The right optic nerve was slightly blurred in outline and decidedly pale , the left gave a perfect picture of neuritis descendens She had been sick two or three weeks with fever closely resembling remittent, supposed to be of malarial origin She was given 2 to 3 grains of quinin daily for three or four days until she had taken 40 grains in all She complained of some headache and said her eyes hurt her, but had no signs of meningitis I put her on iodid of potash in gradually increasing doses until she showed its physiological effects and then added strychnia and dil phosphoric acid to the treatment She was brought to me regularly about once a week until the end of December After the first week she began to see light and from that time steadily improved I saw her the latter part of February, 1893 and her sight was perfectly restored, both optic nerves being normal

This case of neuritis I attributed to malarial poisoning, as I thought the others due to the pathological alterations attendant upon typhoid fever, on the grounds above given I have no comments to make and simply submit them for discussion

Note —Dr Oliver has since written referring me to his articles in Vol IV of Keating's Cyclopedia, and Vol II of Burnett's System of Diseases of the Ear, Throat and Nose, for his views on this subject

Dr de Schweinitz—When I wrote to Dr White concerning his experience with optic nerve atropy in fever I was under the impression that he wished data only in so far as typhoid fever was concerned I was not aware that the Doctor intended to cover a more extensive ground , otherwise I might have added other cases to those which I had reported I indorse thoroughly Dr White's use of strychnia in optic nerve atrophy, especially its use in full physiological doses, believing that by these alone good results are produced, while practically no effect is achieved by the ordinary doses which are administered In discussing blindness after fevers it was very essential to eliminate the possible influence of quinin, which I have no doubt Dr White has done in his case, and which, indeed, was practi[illegible] excluded by the exceeding smallness of the dose Nevertheless, small doses of quinin in patients exhibiting idiosyncrasies are quite capable of producing blindness I have seen temporary amaurosis follow the administration of 15 grains of quinin in divided doses during twenty-four hours, and Dr Horatio Wood of Philadelphia, has reported a like result after the exhibition of 12 grains

Dr White—Dr de Schweinitz seems to think that there was a possibility of this case being blind from the use of quinin, a thing which I carefully considered before attributing the blindness to optic nerve trouble caused by the fever I have never seen as little as 2 grains of quinin at a dose produce blindness Two or three grains daily until she had taken 10 grains would hardly have been sufficient to produce an effect like this I have seen cases where blindness was apparently produced by malarial influence before quinin was given These cases usually recover

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ECCENTRIC POSES OF THE HEAD

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY J ELLIOTT COLBURN, M D

PROFESSOR OF OPHTHALMOLOGY CHICAGO POLICLINIC

In the following paper I wish to call attention to a few cases illustrating a large class of malpositions and eccentric poses of the head, due to lack of equilibrium between the motor muscles of the eyes These malpositions are assumed by the patients, either to prevent diplopia in paralysis, or to relieve the strain put upon weak or illy balanced muscles Such cases are frequently referred to the orthopedic or general surgeon as wry-neck or spinal curvature, and in a case now under my care, an operation upon the neck muscles was seriously considered for the relief of an eccentric pose, due to insufficiency of the right exterior and superior recti

Case No 1—Patrick K , strong, well built, and despite his defective eyes, well educated, applied to me in July, 1887, for a correction which I found to = O C + 3 G S + 1 25 cyl ax 90 V = 20 30 He carried his head thrown back, mouth partially open and nostrils dilated, thus presenting a most ungainly and unprepossessing appearance In this, the habitual pose of the head, he had binocular vision and had experienced no inconvenience except that attributable to ametropia With head erect and in the normal position he suffered annoying diplopia, vertigo, and after a brief enforcement of this pose a severe headache with nausea The muscle test with prisms, head in normal position, gave a constant right cataphoria 15 degrees, exophoria 10 degrees There was no evidence of ptosis Repeated examinations giving about the same result, I made an advancement of the superior rectus of the right eye and a tenotomy of the opposing muscle Two months later we found that he carried his head in almost the normal position, and when reduced to the normal manifested 2 degrees of hyperphoria This was corrected by a tenotomy of the superior rectus of the right eye, leaving an exophoria = 2° with abduction = 10° = adduction = 20°

As the patient now maintained his head in the normal position and complained of no asthenopia, I advised him to return in a year, or sooner if he experienced annoyance Almost two years elapsed, however, before his return, and upon reexamination I found no exophoria, asthenopia or any symptoms that could be attributed to his eyes, both pose and movement of the head being normal

Still another case involves about the same muscle condition, but in addition to the pose of the head the patient was subject to epileptiform attacks, occurring one in two or three days History as follows

Case No 2—Mary R , age 15 years, strong, well developed, and in good health but r the fits to which she was subject

The patient rarely attempted to pose the head in a normal position, always complaining of vertigo when attempting to do so The only way in which it could be avoided was to throw the head far backward In this position she could see objects on the horizon line without other annoyance than that due to the position of the head When the head was firmly held in the normal position, and the eyes were directed to the horizon line, there was found to be right-hypo exophoria, i e the right eye was directed down and outward Under atropin vision = 20 80, which was corrected by + 1 D In order to correct the muscle error, the right superior rectus was advanced and a guarded tenotomy made upon the inferior rectus Later, the right externus was cut and the internus advanced In about two months after the first operation the head could be carried constantly in the normal position, and the eyes soon gained the normal freedom of movement There still remained a tendency outward of 3 degrees which was not corrected About a year later, and following the first menstruation the epileptiform attacks ceased

Another type of malposition sometimes obtains in patients afflicted with esophoria or exophoria A case evincing this occurred in a lad of 14, in good general health, and who presented no nervous or other symptoms of disease, the left side of the face, however, was illy developed He habitually inclined his head to the right with a disposition to open the mouth unsymmetrically, the left angle being more obtuse The eyes were directed strongly to the left, in this position vision was 20 20 and binocular The head placed in the normal pose gave an exophoria = 15° to = 20°, adduction =0, abduction =25° test with prisms in appropriate position The image was inconstant

I made double tenotomies of the externi and advanced the internal rectus of the left eye Five days after the operation the exophoria = 5° remained constant and two months later I again tenotomized the left external rectus obtaining 1 degree of esophoria The patient was discharged with directions to return in three months at least, and sooner if further annoyance was experienced Subsequent examination, head held in normal position, gave no evidence of heterophoria

Still another form of malposition gives its unfortunate possessor a decidedly repulsive aspect The head is bent forward, the chin is markedly retracted and the features often mold themselves into an uncanny grimace These patients have binocular vision with the head in the above described position, but directly the head is adjusted to the normal pose a heterophoria is manifested Young patients frequently struggle violently to resume the malposition

Case No 3—G K, age 17 years, maintained his head in this distressing posture, displayed an awkward staggering gait, nervous and illy coordinated movements of the head and body V =20 60, hyperopia = + 2 50 D O S hyperphoria = 3 degrees esophoria = 10 degrees (adduction 40 degrees abduction 0 degrees) He was given a full correction There was no improvement in position or coordination, therefore I concluded to correct the left hyperopia This was done by graduated tenotomy and advancement respectively of the superior and inferior recti in the right eye Two weeks later as there still remained 10 degrees of esophoria I made a double guarded tenotomy of both internal recti resulting in an esphoria of 1 degree

Much difficulty was experienced in compelling patient to maintain the normal pose of the head, but in an exceedingly brief space of time his gait appearance and manner of speech were much improved Four months later as some esophoria still persisted, I again tenotomized and fully corrected the error This patient was particularly unfortunate in his infirmity, as from early childhood he had been exceedingly sensitive regarding his appearance, and greatly mortified that even under the instruction of the best masters, he had been unable to amend for any appreciable length of time his noticeably eccentric attitude The correction operations effected such a surprising transformation, that after an absence of some months from his family they were enabled to recognize him only by his voice I have never seen so complete a metamorphosis in one's appearance as he underwent I regret that I am not allowed to present photographs In order to give an idea of the full extent of the affliction, these patients must be seen while moving about and not aware that they are observed

In these cases there may never be a history of strabismus, the patient from early childhood adjusts the head to the position best calculated to avoid diplopia, and frequently there is no history of asthenopia or any symptom that could be classed as neurasthenic

Still another modification of this form may obtain where it is not a question of double vision, but of muscle deviation involving both superior recti and not uncommonly the levator palpebrarum, and more or less stenosis of the aperture Such cases demand tenotomy of the inferior and advancement of the superior recti and levator palpebrarum, and a free canthoplasty to correct the malposition Canthoplasty, advancement of the levator palpebrarum, tenotomy and advancement of recti muscles all can be accomplished in the above mentioned routine at a sitting, still I consider a more preferable method includes the canthoplasty and advancement of the levator in a first operation, and some weeks later, the operation upon the ocular muscles proper, as the correction of the ptosis and aperture may, in a degree, modify the operation for the recti muscles

These are typical cases and subject to many modifications, in none of them did I find a history of nervous disturbance occurring at any time The only symptoms simulating the latter condition were the tendency to incoordination, grimacing and awkward posing of the body It requires great patience, some tact and a thorough study of the conditions governing these cases to properly correct such errors From these causes of malposition must be eliminated maladjustments of the neck muscles, deformities of, and injuries of the head

A Case of Malposition following an unguarded complete tenotomy—Chas T, 15 years of age had been operated on for strabismus four years previously, and judging from my knowledge of the operator's work, there had been performed a complete unguarded tenotomy and no examination made to correct an existing hyperopia The left eye was directed out with slight tendency downward, the right followed, and binocular vision was secured by posing the head backward and to the right The movement of the left eye was limited toward the nasal side allowing but two milliamperes, from median line in that direction When the head was forced into the normal position the right eye was five milliamperes above its fellow An examination of the cicatrix showed broad and extensive adhesions After staining with India ink the sclero corneal junction to mark the normal position of the muscle, I made an incision and found the muscle attached below the equator of the eye and quite far back Advancing and raising the muscle to its normal position, I secured it by a double armed suture After recovery from the operation the patient was ordered to use his full correction under atropia and to return in six weeks Upon his return 4 degrees exophoria persisted, we tenotomized the external rectus, this fully corrected the error and head and eyes resumed their normal position These cases are not so infrequent following the old operation for strabimus

Malposition due to partial paralysis of the recti mus-

cles allowing the eye to move only to the median line and fixed for a definite distance —This form of anomaly is one of the most annoying with which we have to deal There is no position in which the head can be placed to secure uncomplicated proximal vision This is especially distressing if the patient be so unfortunate as to be unable to suppress the image of error

Case No 4—Mrs H , age 23 had homonymous strabismus with fusion at 2 mm pose of the head to the left or right, head in normal position at 20 feet, esophoria = 15°, adduction = 40, abduction = 0°, movement of the eyes limited to median line, left eye no power of abduction, vision 20 30, under atropin + 75 O D and O S gave 20 20

At the request of our patient we tried everything adapted to correct such errors, galvanism faradism massage, stretching, etc , of the externi muscle, in the endeavor to tone and stimulate the interni preparatory to tenotomy and advancement Three months of unremitting effort secured an abduction of + 30, a guarded tenotomy and advancement gave adduction 30° abduction 2° with normal position of the head and freedom from a constant vision of the nose Abduction continued below normal, but for central and proximal vision there was no annoyance In this case I advanced the external rectus of the left eye and made two tenotomies on each of the internal recti at different times before I secured central remote fusion

This patient has lately called upon me again, complaining of severe pain in the right eye, following every attempt to move the eye even to the median line Muscle tests showed that there was an eso phoria, or tendency of the visual lines inward equal to 8 degrees, but the total displacement inward (Landolt perimeter test) was, right eye fixing, left eye tended in 12 degrees, showing a tendency to pose the head slightly to the right in attempting to look at objects either at a proximal or remote point As the patient would not adjust herself to the abnormal relation existing between the eyes, and I could not persuade her to wear prisms, I corrected by making a guarded tenotomy upon the right internus, resulting ten days later in a remote and proximal fixation in the normal position without painful effort I presume it may be best, somewhat later, to correct the displacement in the left eye, making a guarded tenotomy, however, this I should not suggest to the patient unless she complains of further pain

The method which I adopt in all cases of asthenopia has been strictly followed in the management of these cases I first attend to the correction of errors of refraction, then after a sufficient time has elapsed the correction of the muscle condition is carefully considered I prefer the Stevens phorometer for low degrees of heterophoria, using the Maddox rod, and divide prism, etc , as aids in measuring the error and educating the muscles As to the technique of operations for tenotomy and advancement, I have but little to offer that is new, and nothing purely original

In the guarded tenotomy which I now make for the relief of very low degrees of heterophoria, I follow the plan suggested by Dr Stevens or Noyes, also Stevens advancement in errors of low degree, with the exception that I use a broader divulser to separate more thoroughly the numerous bands of attachment between the tendon and the ocular walls, as this latter condition may prevent the lengthening of the muscle and render imperative the tenotomy To attain the maximum effect of a complete tenotomy without danger of displacing the tendon, and to regulate the position of the future attachment I proceed as follows

Enter the conjunctiva just above the lower border of the muscle to be receded, separate the capsule and tendon from the conjunctiva, grasp the center of the tendon with the forceps and proceed as in graduated tenotomy, grasp the center of the cut tendon with broad fixation forceps and introduce the needles of a double armed suture, draw them through, transfix the conjunctiva as far back as you wish to displace the tendon, then bring them out through the conjunctiva, now complete the tenotomy, again using the divulser to separate the tendon from ocular walls, the suture is now drawn up and tied, but not too tightly Should the conjunctiva wound gape, close it with a light suture This operation secures both maximum effect and proper attachment

I have found it necessary, preliminary to operating for heterophoria, to make a thorough study of both pose and movements of the patient before measuring the muscle error or in any way embarrassing them The best plan is to draw their attention to books, curios, people, to distant buildings meanwhile observing closely and making notes of all interesting deductions, remembering the general rule that, "the head moves in the opposite direction to the projection of the visual lines " A careful chart should be prepared and notes made of every operation and its results, for usually several cuttings must be made before a perfect orthophoric condition in the normal pose can be obtained I have found it expedient to apprise my patients of this before commencing the operations As we are able to do all of the surgical work under cocain anesthesia, much of the terror and all of the danger of tenotomy has been removed

DR GOULD—I have had two or three cases that somewhat resembled those reported by Dr Colburn One patient carried his head back in order to avoid double vision due to heterophoria By carefully adjusting glasses, his muscles were strengthened so that he held his head in a normal position One other patient had quite a distortion of his features, his forehead being wrinkled in concentric curves clear from his eye to the roots of his hair It was very noticeable After three months he was holding his head straight with the skin of his forehead nearly straightened out I had still another case somewhat similar to this one

DR JACKSON—I that that the class of cases to which Dr Colburn has called attention is a very important one, and one to which the attention of the profession needs to be more generally directed I feel like taking exception, however, to his classing them as cases of heterophoria, if I heard some of them correctly They are rather cases of paralytic squint in which it is impossible to obtain binocular vision in the central portion of the field of vision I have seen quite a number of these cases, and have also seen the other cases, which could be classed as heterophoria because binocular vision could be obtained in all portions of the field of vision though only with undue effort When Dr Stevens gave us the new terms, the "phorias," I hoped that they would be applied only to cases of muscular error which correspond to concomitant squint, and that for these cases of special weakness in one muscle or group of muscles we might still use the very significant term, insufficiencies

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WHEN THE MERCURY WENT DOWN —The *Chemist and Druggist* offers us the following Mrs Mulcahey "Shure, doc-ther and is it thrue that little Jimmy O'Toole bit yoore termomety in two and swallowed the mercury?" Doctor Yes, my dear madam, it is, and the boy is dead " Mrs M "Shure docther, an' it were a cold day for Jimmy, poor bye, whin the mercury wint down " Doctor "Yes, madam, he died *by degrees* "

TWO MORE CASES OF ORBITAL AND OCULAR GROWTHS, WITH SUBSEQUENT HISTORY OF CASES PRESENTED LAST YEAR

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY JOSEPH A WHITE, A M , M D
RICHMOND VA

I here present for your consideration two cases of ocular growths which have come under my observation since our last meeting, thinking they might be of interest

Case 1 Orbital Growth, Fibro sarcoma (Post-ocular) —Betty Lytle, colored, age 24 of Blackstone, Va , came to me Sept 27, 1892 In May, 1892, she had consulted her physician, Dr Harris, about a severe pain across the forehead and through both temples He could find nothing abnormal about the eyes, except a slight redness of the conjunctiva of the left eye He treated her for neuralgia, but the pain still persisted and gradually grew worse He could get no history of syphilis, but thinking the pain might be due to a gumma he put her on iodid of potash, but with no relief The left eye soon began to show prominence without local signs of inflammation He then concluded to send her to an oculist and gave her a letter to me On the way she stopped with friends in Petersburg who advised her to consult a physician there He advised her to have the eye punctured and the fluid drawn off as he expressed it She returned to Dr Harris with this advice, which he did not follow, as he could find no signs of a collection of fluid He then sent her to me again I found the eye very prominent, so much so that the lids could hardly be closed, although she could still see fairly well I attempted to remove the orbital growth and save the eye, but it was so large this was not practicable and I removed eye and tumor, which nearly filled the orbit

I have had a letter from Dr Harris the past month saying she was annoyed at times, especially at night, with pain in the orbit, but he could find no signs of recurrence The woman looked well and was doing her usual work I sent the growth to Dr William M Gray of the Army Medical Museum, who promised me a full report on its nature, as well as a section of the growth for this meeting, but have not received it He stated, however, that it was a fibro sarcoma of the orbit

Case 2 Melanotic Sarcoma of Choroid —Miss F , of Milton, N C , a lady of about forty years of age was sent to me Feb 22, 1893 by Dr Dodson her physician, to have her left eye enucleated, because it was blind, disfigured by a large black spot and was giving her constant pain I found the eye to be totally disorganized, anterior chamber obliterated, lens cataractous and a large black patch of the sclerotic about a half inch long and a quarter inch wide above and to the outer side of the cornea I diagnosed melanoma of the eye and feared it had already penetrated the sclera posteriorly As the tension was not increased at all and the eye was less painful than it had been it was enucleated Feb 23, 1893, under cocain The optic nerve was drawn out and cut as far back as possible As far as a microscopic observation went, the growth had not penetrated the sclerotic, which was seemingly intact

I sent the eye to Dr Gray who reported it to be a melanotic sarcoma originating in the ciliary bodies or choroid, that it was of a mixed variety, composed of large and small, round and spindle cells, that it had infiltrated through the sclerotic, forming small pigmented nodes on its outer surface He sent slides of this tumor, which you can examine These two cases will each probably have recurrence of the growth, although it is not certain

Last year I presented four cases of orbital and ocular growths operated on at the clinic of the Richmond Eye, Ear, Throat and Nose Infirmary, within four months—two by Dr Dunn and two by myself I also exhibited very handsome micro photographs of these growths which were most abominably reproduced in the JOURNAL, giving no idea of the original plates Two of these were so-called malignant fibroids of the orbit (Cases 2 and 3) One (Case 1) was a melanotic sarcoma of the choroid, similar to the one I have just presented The fourth one was an orbital sarcoma of the choroid which Dr Gray called a tuberculous growth, because of the peculiar microscopic appearances resembling tubercle more than anything else Thinking the further history of them might be of some interest, I have taken the liberty of appending it to the above report Case 1 (melanotic sarcoma of the choroid), has had no recurrence in the orbit I wrote recently inquiring about his condition and was informed that he was ill with some obscure liver trouble, but that his eye was pretty much as when I saw him last From this information I concluded he was suffering from a metastatic malignant growth of the liver

About eighteen years ago I had a similar experience I enucleated a large growth of the orbit (the eye had been previously removed) which on examination proved to be a melanotic sarcoma It was half as big as my fist and projected considerably beyond the orbit It was so firmly attached to the orbital walls that I had great difficulty in freeing it from its attachments, and was compelled to remove almost entirely the superior orbital plate I applied Vienna paste to the remainder of the orbit, and the man made a rapid recovery I expected a speedy recurrence, but during the three years he lived there was no return of the growth A postmortem, however, showed that his death was due to a malignant growth of the liver, exemplifying the metastatic nature of these growths

Further history of the case of malignant fibroid of the orbit (Case 2 reported last year) Patient reappeared at the clinic July 25, 1893 Tumor had grown again It had chosen as points of origin all the areas of the bone from which the periostdum had been stripped in the former endeavor to eradicate the growth This was found out during the operation for the removal of the growth The bleeding was excessive The tumor was found to have passed backwards into the sphenoid fossa and had sent its prolongations through the ethmoid plate Negro returned to the clinic only two or three times to have the wound dressed Reappeared Dec 5, 1893 Tumor was quiet for three months, when it began to grow again It now became a huge fungus which protruded from the orbit, infiltrating the adjacent skin Attempt was made to clean out the orbit as far as possible, but operation was unsatisfactory and bleeding was excessive Operation did not check the growth of the tumor, which had gone into the antrum, nasal cavities, etc Patient died of exhaustion in February when the tumor had attained a size almost beyond belief

Further history of case of tuberculosis of orbit (Case 4 reported last year) Appearance of a growth between the eye and the upper part of the orbit in the autumn of 1892 As it gave the patient little inconvenience no operation was done until March, 1893, when attempt was again made to remove the tumor without enucleation of the eye Operation apparently successful No return up to May 21, 1893 Microscopic examination of tumor removed showed it to be a small celled sarcoma which had infiltrated the lachrymal gland Tumor will probably return This second examination was made by another pathologist who did not find the peculiar tuberculous appearances, "the nests," described by Dr Gray when he examined the growth Case 3 was one of fibroma of the orbit and I expected it to recur and speedily, too, because fibromas of the orbit while not regarded as malignant in structure, are practically so from their tendency to recurrence and because, apparently, I had not succeeded in totally enucleating the growth, but rather to have amputated it at the sphenoidal fissure through which it seemed to pass Up to one month ago, however, nearly eighteen months after the operation she has shown no signs of recurrence What the future may develop I can not say, but trust I may be mistaken in my unfavorable prognosis

NOTES ON BIFOCAL SPECTACLES IN APHAKIA

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY H V WURDEMANN, M D
MILWAUKEE, WIS

The satisfaction expressed with bifocal glasses by hyperopes, whose presbyopia necessitated stronger convex lenses for reading, led me about a year and a half ago to advise this form of spectacles for aphakic patients The conclusion reached seemed so natural to my mind that I believed, until I examined the literature of the subject, that the same idea must have occurred to many of my colleagues, and that such glasses must have been used for cataract patients, practically since the introduction of the cement bifocal Due and strict search having been made nothing was found in the literature, and but little new was gathered from the manufacturing opticians concerning the trial of such glasses by other ophthalmists

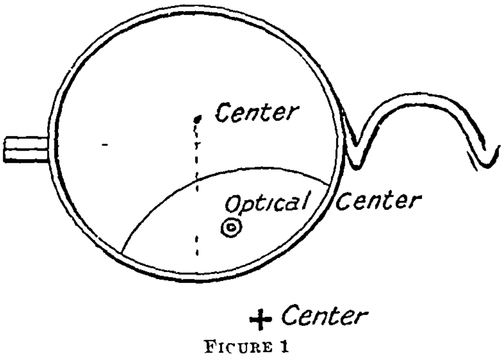

Figure 1

The most appropriate form seems to be that in which the refractive value is made greater by cementing a semilunar shell to the lower part of the larger lens On account of the thickness of the strong convex lens (from 8D to 12D) the "split or Franklin bifocal" is not applicable The cost of grinding the reading on top of the distance lens militates against the combination being made in one piece The cement bifocal is comparatively cheap and has given satisfaction It has been found advantageous to modify the ordinary form by making the spectacle eye of a high oval, nearly round, as this gives a larger field for distant vision, also to make the reading shell small and placed diagonally a little to the nasal side, as was advocated some years ago by Klein in his form of bifocal lens (See Fig 1) This gives a better field for near vision and likewise diminishes the prismatic effect of the larger lens There is an average difference between the visual lines for the near and far distance of 2 mm , which amount of decentering in a 10 D lens would make an effect equal to Pr 1 25 D, an amount of artificial exophoria which may prove troublesome. In some instances I have found it advantageous to decenter the larger lenses upwards 1 to 2 mm , varying with the case, as the unpleasant upward projection of the ground is thereby relieved It is advisable to place the strongest convex surface away from the eye in all instances, and to grind the cylinder on the posterior aspect of the glass, as has been advocated by Gould

When the formula is for simple convex lenses only, the lens may be made concavo convex, and the reading shell is best cemented on the posterior surface of the larger lens, but when a cylinder is involved on account of the difficulty in grinding it on so thin a shell, it must be placed in front In compound formulas the periscopic form is out of the question and the cylinder should be ground on the plane side of a plano-convex lens Nearly all eyes, aphakic ex operatione, are sufficiently astigmatic to warrant the cylindrical correction, and thus it is but rarely that we may give our patients the periscopic form of lens

The advantages of bifocals in aphakia are those which presby-hyperopic patients acquire by the use of one pair of glasses for all vision They may be properly given to nine out of ten cataract patients whose resulting vision after operation allows them to read ordinary print with their correction

805 Grand Avenue

Dr Murrell—I have been using bifocal lenses after cataract extraction for a number of years I have several patients wearing them now My next door neighbor has worn a pair for several years, has good vision and can read fine print all day long I advise the use of them

Dr Ziegler—I have been ordering these bifocal cataract lenses for several years, in fact ever since bifocals came into general use They are undoubtedly the most convenient lens for aphakic eyes Even where only one eye has been operated upon, bifocals are superior to the more clumsy 'reversibles" I think Dr Wurdemann has overlooked the very important "toric" or "ellipse" lens, which was presented before the American Ophthalmological Society by Dr Harlan in 1885, and subsequently discussed in a paper by Dr Green This is especially advantageous where we have a cylinder in combination with very high sphericals It is composed of two cylinders ground on the same side of the lens, and at right angles to each other As one cylinder is stronger than the other we secure the effect of a sphero cylinder, the balance of the spherical is then ground on the other lenticular surface We thus practically divide the spherical on each surface of the lens, and then grind the cylinder on one of these spherical surfaces This makes a much thinner lens than the old form where the cylinder alone is on one side and the large spherical bulge is on the other But aside from being a thin lens, its chief advantage lies in the fact that it furnishes a greater clearness of visual field, which will be promptly appreciated by the patient This lens may also be ground periscopic. The bifocal slip can easily be added to either form

Where the two eyes have been operated upon, I have sometimes prescribed a distance correction for one eye, and a reading correction for the other This arrangement is particularly applicable in those cases where there is considerable muscular insufficiency It allows one eye to enjoy clear vision for distance, and the other clear vision for reading I ordered such an adjustment recently for a physician whose left eye I had operated upon for zonular cataract, while the right one still retained good peripheral reading vision As there was considerable muscular deviation in the vertical, a prism was added to the glass He was ordered H O D S — 2D for reading, O S S — 9 D P ⊃ 4° base down, for distance

It may be well to bear in mind the fact, that discomfort from the use of cataract lenses may be entirely due to muscular deviations, and we should order the proper prismatic correction wherever needed

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PERNICIOUS HYPERTROPHIC CONJUNCTIVITIS AND ITS TREATMENT

Read in the Section of Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY CORNELIUS WILLIAMS, M D

ST PAUL MINN

I shall not occupy the time of this section by a definition of the pathology of this affection Under the generic name of trachoma, the disease is well known to all of you Since, however, a name should be definitive of as many pathological features of an affection as may well be, to my mind the name which I have chosen is more appropriate than any that I have seen applied to this morbid condition

Pernicious hypertrophic conjunctivitis, as usually presenting itself to the surgeon, is chronic and complicated The disease will have involved the cornea and there may be, or have been iritic implication, as even the deeper tissues of the eye do not escape In a case which I had an opportunity of intimately observing, I was able to fix the time of incubation at five days from the time of inoculation to the time of declaration of the disease, though I can well understand that the term may vary The emphasis of the primary declaration, I fancy, will depend very much more upon the quality of the seed implanted in that particular case, than upon any peculiarity of the culture medium I have seen cases in which the entire conjunctiva had increased more than twenty-fold in thickness, in as many days, and others in which the hypertrophy was not considerable, even though the disease had existed many months

The invasion of the cornea does not always take place through an abrasion of the epithelium, but may, I believe, be accomplished through the lymph channels When once the cornea becomes affected, the ciliary spasm brings a largely increased blood supply to the conjunctiva, and the vicious circle is established The later phases of the disease are of great interest The form of degeneration marked by the development of trachoma bodies may be absent entirely in some cases and abundantly present in others Those cases that have been the subjects of irregular and severe treatment of different kinds are rather more apt to present that peculiar manifestation, conjoined with atrophic spots, while such as have not been treated at all, save by simply cleansing, although long in existence are on the whole better off than those in which the treatment has been harsh

That the disease, as we now find it, ever originates in any other way than by direct contagion, I think few will maintain That there are a great number who, in all probability, receive the contagium on the conjunctival surface, and escape the development of the disease, is due to the fact that an actual lesion of continuity is necessary to infection I have seen cases that make me believe that pernicious hypertrophic endo rhinitis may result from the conjunctival affection, by auto-inoculation In the case of a Russian girl of 6, the turbinated bones had undergone complete atrophy from this cause It is the exceptional case in which an eye is lost through this disease, though many are damaged beyond repair

The disease is very frequently confined to one eye, or may affect the second eye only in a limited degree It is not unusual to see a virulent type of this inflammation in one eye, while the other member presents the appearance of slight hypertrophic changes, but little secretion with absence of corneal invasion With appropriate excitation, however, the morbid process in the seemingly favored eye will kindle and attain a dangerous exaltation, all within a very few days Once this pernicious hypertrophy has actively involved the entire conjunctiva, it never again recedes to its former line of behavior

This affection may last an average lifetime It is curable, but at an expense of a certain loss of the conjunctival substance, the degree of loss in direct proportion to the hypertrophy It goes without saying that in addition to the tissue loss, as the result of the disease, injury inflicted by way of treatment is responsible for much of the deformity of the tarsal envelopes, and consequent damage to the eye so frequently seen

Treatment —There is no disease of the eye so often ill treated as pernicious conjunctivitis In the primary affection, ice should be used with much caution. While a valuable remedy, it may actually aggravate the affection by inducing a vasomotor paralysis of the conjunctival vessels Ice cloths should be thin —bits of absorbent cotton are better—and should not be used longer than an hour at a time, with an interval of an hour Mild astringents should be used from the very first Nitrate of silver, 1–5000, or bichlorid of mercury, 1–20000 or 40000, the conjunctival sac should be very gently and thoroughly flooded with one of these solutions, alternating with a warm solution of boric acid, ten or twelve times a day, or oftener, how often must be left to the discretion of the surgeon Of one thing, however, he can be assured, i e, in very many, if not in all cases, any application followed by reaction apparent to the eye of the surgeon, will be resented by the eye of the patient This reaction is the surgeon's guide He may use the astringent applications as strong and as often as the eye will bear, without apparent reaction If he transgress this rule he will lose ground I have used the bichlorid solution 1–400, with only a little smarting and increase of redness, lasting for five minutes, while on the other hand, a 1–3000 solution, is sometimes highly irritating An application which causes pain for longer than five minutes, while it may do good is almost sure to do harm This, I believe to hold good for any stage of the disease but it is, of course, less true in the later stages It may be well to bear in mind that the condition of great hypertrophy is a condition of great tolerance and insensibility which, however, may only last a few days after active treatment begins

The hypertrophy will begin to diminish, and does diminish, *pari passu*, with the diminution of the secretion The retrograde metamorphosis is marked by lessened secretion Whatever the treatment adopted, I have never observed lessening of the hypertrophy until the secretion had very much diminished I am convinced that, in any stage of the disease, the frequent application in the course of the day of a solution of sulphate of copper or the mercury bichlorid 1–30000 or 1–50000, will accomplish more than can be attained by a single application of either remedy of sufficient strength to produce visible reaction In fact, that the successful treatment of pernicious conjunctivitis, whatever the agent employed, must depend upon the frequent use of that agent, and in such strength only, that no apparent reaction shall occur When trachoma bodies appear, the application of jequirity, or better, the expression process, certainly much hastens the matter of involution, but it is questionable if the conjunctival surface will have been left in so good a condition after either jequirity or expression, as it would have been had the method of very frequent treatment with the bichlorid, or some similar acting drug, been adopted Now, as to the choice of the medicament, I think mercury bichlorid perhaps the best, but I doubt not that there are many substances which might be successfully used instead, just as in urethritis, which this disease so much resembles, there are many remedies Many surgeons are agreed that the most proper way of treating the urethral disease is by means of mild and frequent medication

It would seem like a work of supererogation, to thus dwell upon the minutiæ of treatment before this section, but my personal experience, costly enough has taught me that able surgeons in high places do not always address themselves with that conscience to the treatment of this affection that its importance demands, and which the patient has a right to expect from his physician Atropin is absolutely indispensable as an adjunct in the treatment of pernicious conjunctivitis It should be used early, even before any implication of the cornea has declared itself, for by allaying ciliary spasm the first part of the process of the vicious circle establishment is rendered impossible It ought to be incredible that the imperative indication for the use of a mydriatic could be overlooked by the surgeon in the treatment of the disease in question, yet I, myself, am the possessor of a ruined eye, and due to this very oversight on the part of a surgeon generally as competent as any in the country

The detail of the toilet of the eye, after whatever application, is of importance In treating the eye, instead of a camel's hair pencil or a dropper, I use a small probe, so wound about the end with absorbent cotton that an expanded portion projects This is dipped in the solution to be used and the turned lid is flooded with the solution which readily flows from it The lower cul de-sac is similarly treated, after which the ciliary margins are gently freed from every adhering bit of secretion and then carefully dried If this is not done the edges of the lids are constantly itching and it requires unusual control on the part of the patient to avoid rubbing the eye, and consequent aggravation of the disease process

When I first saw pernicious conjunctival disease treated, it was done entirely with sulphate of copper in solid form, and I speak of that method of treatment here to condemn it as brutal, painful, unskillful and unsuccessful I have seen children with hypertrophic conjunctiva, with and without trachoma, actually become men and women, the while constantly treated with blue stone, and after seven years they were no better than at the beginning Surely this is an opprobrium and should suffice to damn that method of treating the disease I wish particularly to condemn any irritating application, and especially peroxid of hydrogen, in the acute corneal ulcers of pernicious conjunctivitis I well remember the pain which the peroxid produced in my own eye, and from the use of which started an iritis that, untreated, resulted in complete closure of the pupil with its inevitable consequences, and it is only by such malpractice that an eye can be lost in this affection

It is needless to say that abstinence from use of the eyes is of prime importance The disease, difficult enough to cure at best, is aggravated by every considerable effort of accommodation and convergence

CORRESPONDENCE

Diphtheria at St Paul

Minnesota State Board of Health and Vital Statistics
Offices of the Secretary and Executive Officer,
Red Wing, Oct 19, 1893

To the Editor —The following is the reply of the Commissioner of Health to your inquiry

"In reply, I would state that there was very little in connection with the whole matter A number of families having children at the Neill School wished to get them transferred to other schools—the Neill School, as I understand it, being rather overcrowded, and to get a good excuse for so doing, got up this diphtheria scare The records show three cases of diphtheria as having occurred within the radius of the Neill School within a period of nearly a month, which is very much unlike the statements made by the people in that vicinity, both publicly and privately I refused to close the school, but Supt Gilbert, under the pressure that was brought to bear upon him by these people, ordered the school to be closed over Friday, Saturday and Sunday, if I remember right, on his own responsibility and during that time had it disinfected, etc That is all there was to it You know the value of newspaper reports, and I am glad you propose to verify by reference to headquarters of each State Yours C N Hewitt,
Secretary

Ethics Again—The Milk in the Cocoa Nut

Richmond, Va, Oct 21 1893

To the Editor —At the annual meeting of the Medical Society of this State, held at Charlotteville October 3, the resolution offered by Dr Upshur of Richmond, affirming our loyalty to the present code of ethics, was passed with only two dissenting votes—the move to "lay on the table" and his second, Dr Hunter McGuire, made a strong speech in favor of the resolution, affirming that the medical men in New York who desired to "let down the bars" were influenced solely by the selfish purpose of getting consultation fees from homeopaths, Very respectfully,
W W Parker

Blank applications for membership in the Association, at the Journal Office

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO 68 WABASH AVE CHICAGO ILLINOIS

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J DUNGLISON, M D Lock Box 1274, Philadelphia Pa

SATURDAY, OCTOBER 28, 1893

TURKISH BATH IN MEDICINE

The Turkish bath as a therapeutic agent is coming into greater prominence every year, especially in asylums and sanitariums Private baths in cities are in many instances largely supported by patients sent from physicians In Europe many of the large hospitals and all the sanitariums are equipped with these baths, as essentials in the treatment of disease The thirtieth anniversary of the first public bath opened in this country, at Brooklyn, N Y, was celebrated last week by DR C H SHEPARD, the founder In an after-dinner address on this occasion, DR SHEPARD reviewed the early history of the baths in the Roman empire Three thousand years ago the Greeks used the hot water and hot air bath, which was the same as our Turkish baths Its use was originally a religious rite to prevent evil spirits from taking up their abode in the body In Roman civilization it attained a perfection that seems wonderful even to-day The largest bath ever constructed was by DIOCLETIAN, and could accommodate eighteen thousand bathers at one time and was over a mile in circumference The Pantheon of Rome, now used as a church, was built as a vestibule to the baths of AGRIPPA At one time there were nine hundred baths in Rome, and every person was obliged by custom and law to use them every week or oftener At Alexandria in the seventh century, the number of baths reached over four thousand It is a curious fact only recently recognized, that during these ages when the baths were so common and popular, no epidemic diseases prevailed Rome, Alexandria and Constantinople, and also the earlier Grecian cities, were singularly free from plagues and contagious diseases during these times As soon as these nations were overrun by barbarians, baths were abandoned, and plagues and epidemic diseases began These baths were lost to civilization, except in a small way at Constantinople, until 1840, when the first bath was opened in England It is said, however, that the bath at Buda Pest has remained in operation from the date of its original construction by the Romans Now there are about five hundred baths in Great Britain and about one hundred in this country Starting at first as luxuries, they have grown to be therapeutic measures of great and increasing value In this address DR SHEPARD reviewed the opinions of eminent physicians in Europe, of the nature and value of the bath, pointed out the possibilities of its influence on disease in the future, and concluded that no present remedial measures gave greater promise in the treatment of disease

In this day of anniversaries it is pleasant to note this event, and to realize that the bath, which has occupied so prominent a place in the highest civilizations of the world and which is so closely allied to sanitary science, is coming into prominence again. To DR SHEPARD the founder (and member of our ASSOCIATION), is due great credit for establishing the first bath, and so persistently urging its merits and claims on the medical public

THE FIRST POSTMORTEM RECORDED IN THIS COUNTRY

The centennial of the Connecticut Medical Society last year, was marked by several historical addresses concerning medical matters a century ago Old papers and records, physicians' account books and diaries, and old letters and legends, were all examined, and many very interesting stories have been gleaned from them One of these old records, dated March 11, 1662, makes note of a vote in the General Court of Connecticut, granting unto MR ROSSITER twenty pounds for opening the belly of KELLEY'S child, and his pains to visit the deputy governor, MAJOR MASON, and MR TALCOT, and other ministrations It appears from the long and minutely written account, that JOHN KELLEY of Hartford, had a daughter eight years old, who was taken ill of some form of bronchial pneumonia attended with delirium March 23, 1661, and died five days later During this illness she complained that GOODY AYRES, who was a general neighborhood nurse, was choking her, and kneeling on her belly, also pinching her She urged that her father should chop off the head of this nurse who was not called to take care of her. After short periods of sleep she would start up and cry out against this woman This delirium of persecution continued until death, in which she constantly asserted that GOODY AYRES was the cause of all her pains and torments The case was considered so unnatural and untimely that a jury of six persons were called to make an inquest

GOODY AYRES was requested to come up and handle the body in the presence of others Among other signs was a reddish spot on the cheek nearest to Goody Ayres, and certain purging from the mouth, with stiffness of the arms, and black spots over the body, were regarded as suspicious Accordingly Mr Rossiter, who lived in Guilford twenty miles away, was sent for to examine the body Several days later he arrived, and with the assistance of the school master, William Pitkin, made the necropsy The following is the record made in the handwriting of Mr Rossiter He condensed his account into six particulars which he said in his judgment were preternatural

1 The whole body, the muscular parts, nerves and joints were all pliable, without any stiffness or contraction, the gullet only excepted Experience of dead bodies renders such symptoms unusual

2 From the costal ribs to the bottom of the belly in the whole latitude of the womb, both the scarf skin and the whole skin with the enveloping or covering flesh had a deep blue tincture, when the inward part thereof was fresh, and the bowels under it in true order, without any discoverable pecaney to cause such an effort or symptom

3 No quantity or appearance of blood was in either venter or cavity as belly or breast, but in the throat only at the very swallow where was a large quantity as that part could well contain, both fresh and fluid no way congealed or clodded as it comes from a vein opened, that I stroked it out with my finger as water

4 There was the appearance of pure fresh blood in the backside of the arm, affecting the skin as blood itself, without bruising or congealing

5 The bladder of gall was all broken and curded, without any tincture in the adjacent parts

6 The gullet or swallow was contracted like a hard fish bone that hardly a large pease could be forced through

This was signed by Dr Rossiter and was evidently intended to convey the idea of death from preternatural causes Mr Pitkin, the school master, followed with sundry observations on the symptoms of the case, and the incidents attending the death and body when laid out This was sworn to and attested by Mr Clark, Secretary of the colony Nothing further was done, and Goody Ayres moved away and the claim or suspicion of bewitching was forgotten In 1663 this same surgeon performed another autopsy on Rev Samuel Stone, who died suddenly The only thing mentioned was that this man had no gall bladder In 1659 a new disease appeared of "bladders in the windpipe" which seems to have been very fatal among children Some examinations revealed this state about this time A curious record of the examination of animals to find the cause of death, is noted in the records of New Haven as early as July, 1650 In a lawsuit over an ox, in which it was claimed that he was killed by overwork, one Edwin Parker examined the body and testified to its appearance The record states that the heart was full of blood, and the liver and lungs were swelled and the flesh was waterish

This Kelley case was the first necropsy that was recorded fully, and the surgeon, Rossiter, was probably the most eminent man of his time It is found from some old records that he received his education in England, and appeared in 1631 in the Massachusetts colony He was an intense loyalist and did not get along very well, but finally he came to Connecticut and lived and died much respected for his medical ability

The centennial volume of the State medical transactions of Connecticut contains many very interesting records of physicians and medical practice in the seventeenth and eighteenth centuries, and is among the first to gather and group this history in a permanent form

LOUISIANA QUARANTINE

The models of the Louisiana quarantine plant on exhibition in the Hygienic Department at the World's Fair are among the most interesting The present quarantine system of the State of Louisiana is based upon that inaugurated by Dr Joseph Holt in 1885, and consists of a complete plant for the fumigation and disinfection of vessels, together with the cargo and effects of ship, crew and passengers

The apparatus for fumigation consists of a furnace for generating sulphur dioxid, from which the gas is forced through a pipe leading to the bottom of the vessel The air used in the combustion of the sulphur in the process of oxidation is drawn from the ship's hold through a pipe whose extremity reaches just below the hatchway, thus drawing through the furnace and rendering innocuous the foul air of the vessel In addition to this apparatus, which is on the steam tug, there is a like supplementary apparatus fixed on a movable car on the wharf The disinfecting apparatus consists of two processes, that by steam and that by a solution of mercuric chlorid While a vessel is undergoing fumigation, either in mid-stream by the tug or alongside the wharf, all textile fabrics and baggage are disinfected by being placed in the heating cylinders These cylinders are eight feet in diameter and sixty feet long, and are three in number, thus providing ample accommodation for the disinfection of the largest steamship After the goods have been opened they are suspended on racks which are run into the cylinders, the heads of which are then closed and steam injected until the thermometer indicates a temperature of 220 degrees Fahrenheit, which is held for one-half hour, when the effects are removed

For the disinfection of furs, leather and rubber fabrics which would be destroyed by the heat, the mercuric solution is used, by means of hose with a spray nozzle which saturates them effectively

The present cylinders in use were the result of long and careful experimentation by Dr C P

Wilkinson, and differ materially from the original wooden chamber erected by Dr Holt

The furnace for generating the sulphur dioxid now used, is an improvement made upon the original by Dr S R Oliphant, and enables the production of a larger quantity of gas of greater proportionate strength than formerly While the system is the same as that adopted upon the original ideas of Dr Holt, the present plant with its improvements is far more effective and gives a greater guarantee of safety

Having had principally to deal with vessels from yellow fever infected ports, it is believed that the efficacy of the Louisiana system of quarantine has been fully demonstrated by its results, inasmuch as no case of yellow fever has occurred upon a vessel after disinfection (although many have been previously infected) and by the absence of the disease from New Orleans, a city which previous to 1879 was perennially infected with yellow fever

The establishment by Dr Holt of the present system inaugurated a new era in maritime sanitation Prior to this time detention, and an attempt at disinfection and purification without isolation was the rule, now detention is only required to as limited a period as is consistent with safety, careful inspection and thorough disinfection, purification and isolation The Marine Hospital Service immediately adopted the same plan with slight modifications, in fact all the maritime quarantines are practically carried on in like manner, and our coast defenses against the introduction of foreign pestilence are in excellent condition

A MODEL HEALTH PUBLICATION

For many years we have been in receipt of many sanitary publications, all of which are useful, many of them admirable, and some of them models, among the latter those of the Minnesota Board are fairly classed

The mortality report for instance, is based upon a careful personal review of all causes of death reported to the Secretary's office for the month to which it is is referred, and is collected to represent the actual population accounted for, and every fact, including individual causes of death, is carefully revised before publication

The Minnesota system of obligatory notification of infectious disease, and the monthly report of causes of death with obligatory notification of all deaths and their causes by medical men, is supplemented by an arrangement the Secretary, Dr C N Hewitt, has with Town Clerks and Health Officers to give the name and address of every physician in attendance upon a case of disease at death

This system is the outgrowth of six years of assiduous effort, the intention being to make this information available every month to Health Officers and physicians On page 66 of "Public Health" will be found in the "mortality record for August," one method of using this information

We reprint the September summary in the Miscellany pages of the Journal in this issue

RIGHT TO ESTABLISH HOSPITALS

An urban sanitary authority has recently purchased a building which it is proposed to convert into a hospital for infectious diseases, writes a subscriber to an English law journal of October 7 The building is not situate within the authority's own district, but in that of an adjoining authority The property owners in the neighborhood feel that their property will be seriously injured by the situation of the hospital, owing to a reasonable apprehension of risk, and interference with the pleasurable enjoyment of their houses for ordinary purposes Now what can be done about it? is the question asked in conclusion The sanitary authority of the district can not, as such, prevent the use of the building as a hospital, it is answered If the hospital can not be used without causing a public nuisance, the sanitary authority, or any owner of property, may maintain an action in the name of the Attorney-General for an injunction to restrain its use But such an action, brought in advance, it is said, has been rarely successful Of course if the hospital when opened is found to be a nuisance, any owner who is aggrieved may bring an action, and will undoubtedly obtain relief A number of decisions are cited in support of these statements, and much the same principles will be found to be true and applicable in this country

ARMY MEDICAL EXAMINING BOARD

The Army Medical Examining Board recently convened in Washington, D C, for the examination of candidates for admission into the Medical Corps of the Army has concluded its labors, with the result of adding five young officers to the Corps We learn that about forty candidates received invitation to appear before the Board but that only thirty-four took advantage of the permission Of ten examined during the first week one was successful, of fourteen who appeared during the second week none succeeded in effecting an entrance, while four of eleven in the third week were more fortunate in the effort to demonstrate their qualifications A notable percentage failed on account of defects of physique, and among these were probably some who might have showed to advantage had they been permitted to proceed with the examination into their general education and professional acquirements We print in another part of this issue, copies of some of the sets of questions used by the Board in the written examinations

THE NEW CURE FOR TUBERCULOSIS

Cures for consumption multiply as thick as the leaves in Vallambrosa, but the victims die as usual' The latest contribution to consumption cures is announced in a dispatch from Berlin to the effect that one DOCTOR J SUMMERBRODT is now curing tuberculosis by the administration of creosote It is well known that creosote is an anti-bacillary agent of high power, but we are sure that Americans will do well to await further particulars before going wild over this new-old discovery The memory of the Bergeron method, the stupendous failure of tuberculin, and the history of the myriad other failures, each heralded in its day as an unfailing remedy for the scourge, will operate to cause a suspension of judgment until results shall have finished the demonstration

THYROID GLANDS

Owing to the interest that has lately been shown in the use of thyroid glands in the treatment of myoxœdema, etc , and to afford physicians an opportunity of determining the value of this agent, Messrs Armour & Co, of Chicago, offer to supply gratis a small quantity of "Desiccated Thyroid Glands" to members of the profession, upon application, for experimental purposes The facilities of this firm for preparing the article are certainly unequalled, and the opportunity seems to us one which is worthy of attention, and which should be taken advantage of in the interests of medical science

MR GEO KEIL of Philadelphia is in Chicago this week, representing the S D Gross Monument Fund, and will call on the leading members of the profession in this city Twelve thousand dollars is the minimum amount required, and the raising of the amount should not be doubtful

Gentlemen desiring to anticipate MR KEIL's visit may leave contributions for him at the JOURNAL office, if more convenient

ASSOCIATION NEWS

Time of Meeting

OCTOBER 16, 1893

To the Editor —The next annual meeting of the Medical Society of the State of Washington was set for the first Tuesday in May, 1894, and I understand that the AMERICAN MEDICAL ASSOCIATION meeting is set for the same date I see that a change in the latter is contemplated Please let me know at the earliest date the time of the AMERICAN MEDICAL ASSOCIATION meeting at San Francisco, and we will arrange our meeting accordingly

Very truly, R L THOMSON, Sec'y

ANSWER —In order to enable State medical societies to send instructed delegates to the next meeting, prepared to vote on the proposed new constitution and amendments, a change of the date of the meeting has been proposed by a few members of the Business Committee A change in th time of meeting can only be authorized by the President, who has not yet issued the call

The Journal of the American Medical Association takes as much interest in pharmaceutical affairs as any medical exchange we receive No doubt the editor recognizes the close relationship which exists between the two professions —*Meyer Brothers' Druggist*, October, 1893

SOCIETY NEWS

New York State Medical Association

Tenth Annual Meeting —Held in New York, Oct 9, 10, 11 and 12, 1893

S B WYLIE MCLEOD, M D, PRESIDENT

INTRODUCTORY SESSION—MONDAY EVENING—OCTOBER 9

The President in his Address referred to the many important contributions that had been made by members during the past ten years, and the share each department had taken He said that although the Association was organized on Feb 4, 1884, it has at present eight hundred members, and a library of over nine thousand volumes

DR JOHN SHRADY of New York County, then delivered an address on

THE MEDICAL WORK OF THE ASSOCIATION DURING ITS FIRST DECADE

He referred to many of the more important papers and discussions such as, Dr Gouley's address on "The Nosology of Disease", Dr Janeway's address on 'Pathology", Dr A Flint, Jr's paper on "Some of the Relations of Physiology to the Practice of Medicine", Dr Van Zandt's paper on "Commercial Prescriptions", Dr McEwen's description of "The Mineral Waters of Saratoga", Dr Leale's article on "Nasal Feeding after Intubation", and many others A prominent feature of the work of the past few years is the practice, adopted from the British Medical Association, of having prepared discussions The first of these, which was proposed by Dr Flint, was on pneumonia They had proved very profitable

MORNING SESSION—FIRST DAY—TUESDAY—OCTOBER 10

DR JAMES G PORTEOUS of Dutchess County read a paper on the

PREVENTION OF DISEASE

in which he referred particularly to the many ways in which tuberculosis was spread abroad Milk is an important factor in carrying infection of various kinds What wonder that the medical profession is urging that dairies should be under strict medical supervision when those engaged in milking the cows are seen to dip their fingers into the pail of milk and wash off the udder of the cow, and by this repeated dipping of their fingers into the milk, remove both filth and disease from the cow and from their own hands, and deposit in the milk? In order to spread a practical knowledge of the dangers of tuberculosis, and the means of limiting its dissemination, the author is in the habit of distributing to his consumptive patients a printed card containing directions for their guidance, and also a reminder to the well persons with whom they are brought in contact He advises them to collect all sputa in a wide mouthed bottle, which is frequently washed out with hot water They are cautioned against spitting around promiscuously, and against kissing people, and they are urged to have separate table utensils, bed linen, table linen and beds Their friends are reminded that consumption is an infectious disease, communicated principally by swallowing the germs, by inhaling them, or by having them gain access to the system through wounds They are also advised not to kiss *any one* on the lips who has a cough

DR E D FERGUSON of Rensselaer County, read the next paper entitled,

AN ADDITIONAL NOTE ON NEPHROTOMY AND NEPHRECTOMY

He reported four cases illustrating the difficulties of diagnosis and treatment in this department of surgery, and called attention to the fact that in nine operations on such patients he had not found any evidence of tuberculosis being the cause of the trouble He thought the drainage tube of rubber which he formerly employed caused undue irritation, and therefore *preferred to use now a free incision* and packing so as to retain an open sinus for a long time

Dr John Cronyn of Erie County, cited a case illustrating the difficulty of diagnosis, and expressed the hope that in *the future the cystoscope* would render valuable aid in determining the true condition of both kidneys

Dr Thomas D Strong suggested that by supra-pubic cystotomy one could ascertain by inspection the condition of the ureters, and at the same time treat the disease of the bladder

Dr Ferguson said that as anything which is likely to aggravate the existing cystitis is liable to propagate the disease still further, he was opposed to the use of the cystoscope or to ureteral catheterization He would prefer to do an exploratory operation

Dr John W S Gouley of New York County, took the same position *An exploratory operation* has the advantage that if it confirms the diagnosis, a nephrotomy may be at once performed

Dr Nelson J North of Kings County, then read a paper in which he advocated the topical application of concentrated lactic acid to epitheliomata and cancroid ulcers This acid is not a caustic, but nevertheless seems to destroy the vitality of abnormal cells

Afternoon Session

Dr N P Dandridge of Cincinnati, read a paper on

THE SURGICAL TREATMENT OF PULMONARY CAVITIES

Such treatment he considered applicable to cases of abscess of the lung, gangrene, hydatid cyst and to tubercular and bronchiectatic cavities Such operations are not uncommonly done under the supposition that the case is one of localized empyema The cavity having been located by an aspirating needle, this needle serves as a guide for the knife After incision the cavity is best treated by packing it with iodoform gauze

Discussion on Lesions of the Pleura

Dr John Shrady of New York County, opened the discussion, propounding the following questions

Question 1—What are the factors of pleurisy? Its forms and contributive conditions? What are the pathological changes in a case of progressive pleurisy ending in recovery?

Question 2—What are the points of differential diagnosis in pleurisy and other affections of the chest?

Question 3—What is the treatment of empyema, with relative value of respiration, rib resection and free opening with tube drainage?

Dr Shrady said that the key to the diagnosis was usually furnished by the shifting line of dullness in the upper part of the cavity The indications for treatment are to limit the exudation at the beginning, allay pain keep the bowels free, and promote absorption When there is enough effusion of serum to produce intermittent orthopnea, or when the chest is half full, or when after a month there is no sign of absorption taking place, it is time to resort to the aspirator Aspiration is best *done in the sixth intercostal* space on the axillary line In cases of empyema if there is not sufficient space between the ribs for proper drainage a portion of the rib may be resected, and a drainage tube without lateral fenestra inserted, and sutured to the skin

Dr William McCollom of Kings County, in replying to the first question, said that pleuritic adhesions are found in about 50 per cent of the subjects examined *postmortem* He attributed much importance to the microbic theory of the origin of pleurisy and explained the apparently contradictory results of various observers by the different stages of the disease at which their investigations were made

Dr J Blake White of New York County replied to the second question He said that the pain of pleurisy is sometimes referred to the abdomen, and may therefore prove misleading Cough pain in the side and dyspnea, in the order named are developed in cases of tubercular pleurisy, but in other pleurisies *the pain* and dyspnea usually precede the cough When the patient shows a tendency to clear the throat frequently, and there is *nothing wrong* with the throat, it is safe to conclude that this symptom is indicative of pleuritic adhesions He did not believe that microbes had anything to do with the etiology of pleurisy

Dr J G Truax of New York County, in replying to this same question, said that the pleuritic friction sound is usually quite limited in area and changes its position frequently, it can be felt as well as heard

Dr Charles A Leale of New York County, answered *the third question by relating the histories of one or two* cases in his practice, in which, notwithstanding the severity *of the attack of* empyema, Nature *had succeeded in effecting* a cure without operative interference Incidentally, also, he gave an *illustration of the contagiousness of* pulmonary tuberculosis

Dr Thomas H Manley of New York County, thought the dangers of aspiration were not generally appreciated He stated that a review of his cases of thoracentesis showed that not one of them had lived after the operation more than three years

Dr Cronyn said he had been in the habit of using the aspirator *quite early in all cases of pleurisy with effusion*, and he had found this treatment only beneficial He would treat acute pleurisy by revulsives, such as dry or wet cups, at the beginning, followed by a cathartic, and afterwards by opium to relieve the pain Opium was preferable for this purpose to any of its alkaloids He did not favor rib resection in empyema, it was unnecessary He also called attention to the fact that consumption *might* be cured by metastasis, and cited a case under his observation, in which an attack of acute mania cured a pulmonary tuberculosis

Dr Donald McLean of Detroit, was also opposed to the use of the aspirator in the treatment of pleurisy, for it is rare that it willl completely empty a cavity He thought resection of the rib in empyema was extremely important, and in accordance with surgical principles

Dr Dandridge took the same position with reference to resection of the ribs, but he thought aspiration was of service in some cases as it produced a negative pressure in the chest and so aided lung expansion

Evening Session

Dr Austin Flint of New York County, presented a paper, entitled

REMARKS ON FERMENTATIVE DYSPEPSIA

As he was firmly convinced that fermentation in the alimentary *canal* is due *to microorganisms*, he naturally resorted to the use of various *anti fermentatives* and among these remedies he had found the subgallate of bismuth the best It is best given in capsules or tablet form, in doses of 5 grains *either* before or after each meal

Dr Cronyn thought that in those cases in which the author *had found this new* remedy so efficient, he would have found hydrochloric acid equally beneficial, for the condition calling *for* treatment is apparently one characterized by a deficiency of hydrochloric acid in the stomach

Dr Henry F Risch of Kings County, thought it was of the first importance in treating these cases of fermentative dyspepsia to ascertain whether the fermentation was due to decomposition of hydrocarbons or of nitrogenized substances If the product of the fermentation be carbonic acid gas, it is evident that the hydrocarbons are at fault, and this class of food stuffs should be eliminated from the diet Similarly if the odor of the patient's breath is foul, *the nitrogenized* substances should be withheld

Dr C Leale alluded to the great benefit that he had observed during the past summer in the St John's Guild Hospital, from lavage of the stomach and bowels in infants, and from the subsequent use of sterilized milk

Dr John A Wyeth of New York County, then read a paper entitled,

BLOODLESS AMPUTATION AT THE HIP JOINT, REPORT OF CASES OPERATED ON BY THE AUTHOR'S METHOD

This method was introduced by him to the profession in 1890, and since then he had been able to collect brief histories of thirty-nine amputations at the hip joint in which it had been employed In thirty five cases, it was done for disease, and in four, for very severe injuries Of the thirty-five, five died, and all of the cases of injury proved fatal

Morning Session—Second Day—Wednesday, October 11

Dr W D Granger of Westchester County, sent a paper on the

VOLUNTARY COMMITMENT OF THE INSANE TO ASYLUMS

He said that the modern notion is that asylums should really be hospitals, and the treatment should be individualized as far as practicable Many insane would avail themselves of asylum care if they could be voluntarily committed, and while several States had enacted laws permitting this, the patient after his commitment was treated about the same as those who had been placed in the asylum against their will The New York law now permits persons who are able to understand what they are doing, to voluntarily commit themselves to family asylums, but not for any specified time

Dr Gustavus Eliot of New Haven, Conn, read a paper on

THE TREATMENT OF ENTERIC FEVER,

in which he laid great stress on keeping every patient with typhoid fever, or any suspicious fever, in a condition of absolute rest, mental and physical, until thoroughly convalescent He advocated giving at the outset from 7 to 10 grains of calomel on alternate days for four doses, and subsequently' administering iodin or carbolic acid in very weak solution

Dr George Douglas of Chenango County, added still greater emphasis to the importance of absolute rest, as a life saving measure, and also favored the giving of two or three doses of calomel at the beginning of the illness He did not approve of the free use of alcoholic stimulants

Dr William Finder of Rensselaer County believed that food should be given sparingly during the early stages, and expressed his great faith in the efficacy of sulpho carbolate of zinc, as an internal antiseptic and astringent

Dr John H Martin of Otsego County, also indorsed the calomel treatment He fed his patients all through the disease, but was decidedly opposed to the use of alcohol in typhoid fever

Dr E R Squibb of Kings County, said that the favorable action of calomel in this disease was no doubt due to the fact that it is first converted into an albuminate, and is then slowly decomposed into the more energetic antiseptic, the corrosive chlorid of mercury

Afternoon Session

Sir James A Grant of Ottawa, Canada, in an interesting paper (which will appear exclusively in the Journal in full) on

RARE FORMS OF GOUT AND RHEUMATISM,

cited the case of a young girl who had all the usual symptoms of perityphlitis, until the sudden development of acute articular rheumatism in the joints of the upper extremities, when the abdominal symptoms immediately subsided

Dr Donald McLean of Detroit, then presented some interesting

SURGICAL AND PATHOLOGICAL MEMORANDA

Among other things he said that a large experience with ununited fractures had taught him that the chief cause of their non union was excessive violence at the time of the fracture He described his method of controlling hemorrhage in amputation at the hip joint by means of an aortic compressor He considers this method superior even to Wyeth's method

Discussion on the Treatment of Appendicitis

Dr Frederic S Dennis of New York County, opened the discussion, propounding the following questions

Question 1 —What proportion of cases of appendicitis end in resolution?

Question 2 —What class of cases require immediate operation?

Question 3 —What class of cases do not require immediate operation?

Dr Dennis said it was now generally accepted that about 50 per cent of cases of inflammation in the ileo cecal region end in resolution, and he did not approve of resorting to operation ordinarily until there had been a rapid pulse, a suppurative temperature, and intense pain for forty eight *hours without improvement The operation is not easy or* without risk, and it is very frequently followed by ventral hernia

Dr Gouley took the same position He related the histories of several cases which had recovered without operation, although at first apparently seriously ill Of course, where there is good evidence that perforation has taken place, immediate operation may save the patient

Dr McLean said the subject was weighed down with difficulties and responsibilities He could recall quite a large number of cases during the past two years where, despite the urgency of the symptoms, and the fact that no operation was performed, recovery was complete

Dr Joseph D Bryant of New York County, said that the relative frequency of foreign bodies in the appendix, in the two sexes, is about the same as the relative frequency of appendicitis in males and females, hence there is probably a close connection between the two facts and this is interesting from an etiological standpoint The symptoms of perforation are usually quite marked, and when present, indicate the necessity of immediate operative interference The presence of the "McBurney point" can only be considered as confirmatory of other signs, for the frequent and marked variations in the position of the caput coli show that no fixed point of tenderness can be looked upon as pathognomonic of appendicitis The existence of a tumor is also of but little assistance, for in about 14 per cent of cases the vermiform appendix is situated in the pelvis and in 20 per cent it is behind the caput coli He would lay more stress upon rigidity of the rectus muscle than he would upon an elevation of temperature as a guide to diagnosis and prognosis

Dr Wyeth said that all the disasters he had seen in this branch of surgery had been due to delay, and not to too early operative interference Again, the danger of ventral hernia is much less after an early operation

Morning Session—Third Day—Thursday, October 12

Dr Douglas Ayres of Montgomery County, read a paper entitled,

THE MALE CATHETER, WITH SOME OBSERVATIONS UPON THE PROPER MODE OF INTRODUCTION INTO THE BLADDER

He said that the proper and scientific use of the catheter demanded a practical application of the familiar anatomical knowledge as to the three great divisions of the urethra —the prostatic, the membranous, and the spongy portions While flexible catheters are often of service in cases where the urethra is unusually tortuous, the silver catheter, No 9 or 10 of the "American" scale, was his main reliance as he could more readily assure himself of the exact position of the instrument The patient should be placed in the recumbent posture with the thighs well drawn up and flexed, and the shoulders slightly elevated It is well worth remembering that the introduction of the catheter in difficult cases is often greatly assisted by pressing down the soft parts above the pubes, thus relaxing the suspensory ligament

Dr Gouley then exhibited an instrument of unusual historical interest—an exact bronze model of the catheter found in the ruins of Pompeii It has the sigmoid form, supposed to belong to a much later period, it is distinctly conical and has one eye, situated close to the vesical extremity He also exhibited a number of catheters of American manufacture, and stated it as his opinion that they excelled in finish those of all other manufacturers Even the cheap 10 cent catheter is made with an excellent finish He suggested that obstetricians should use these in their practice, for owing to their cheapness they can be thrown away after one using

Dr William Finder of Rensselaer County, read a paper on

THE EFFICIENCY OF VACCINIA AFTER TYPHOID FEVER

Some years ago he found that persons who had recently had typhoid fever could be vaccinated with the greatest ease and that they appeared to be no longer immune to smallpox He had had an opportunity to observe this curious fact on various occasions and he now made it a practice to re vaccinate people who had had typhoid fever since their last vaccination He presented these observations in the hope that other observers would either confirm or disprove the theory he presented that typhoid fever eliminated the protection produced by vaccination

Dr H Ernst Schmid in a paper entitled

REFLECTIONS ON THE NEED OF CLOSE OBSERVATION OF DISEASE AND UPON THE VALUE OF HYGIENIC THERAPEUTICS,

narrated some amusing anecdotes showing what wonderful results could be achieved, especially in the practice of medicine by attention to details Commenting on the uncertainties of medical science and art he asked what justice there was in a law which punished physicians for making pardonable mistakes and yet allowed the lawyer who loses his cases through like errors to go unpunished

Dr Darwin Colvin of Wayne County, reported a case of puerperal blindness, in which a liberal venesection shortly before confinement greatly relieved the patient and, in his opinion, prevented the occurrence of eclampsia, and perhaps other severe complications

Dr McGillicuddy said he had seen five cases of blindness occurring in connection with puerperal eclampsia, yet all recovered their vision without a resort to venesection, and in a paper entitled,

A PLEA FOR THE NON OPERATIVE METHOD OF TREATING DYSMENORRHEA, PELVIC INFLAMMATION AND PELVIC ABSCESS,

stated that he had found that the liberal use of hot water, by *mouth and by enemata, increased the portal circulation,* and so promoted the absorption of pelvic exudates Even when an operation becomes *imperative, this treatment* has put the system in a most favorable condition for operation

Dr Thomas D Strong of Chautauqua County was elected President for the ensuing year

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Cedar Valley Medical Society —The following were elected officers for the ensuing year President, N S Pierce, Cedar Falls, Vice President M J A Mueller, Dyersville, Secretary and Treasurer W B Small, *Waterloo* Independence was selected as the place for holding the annual meeting next year

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NECROLOGY

Dr G R Shaw at Antigo, Wis, October 12

Dr J W Green of Marengo, Ill, October 14

Dr W A Martin at Goshen, Ind, October 19

Dr Allan A Stevens at Sinclairville, N Y, October 13

Dr W H Thompson of New Haven, Conn, October 18

Dr J W Weatherford, Portland, Oregon September 20

Dr Justus Duffan of *Houston, at Austin,* Texas, *October 9*

Wm F Hutchinson —Dr Wm F Hutchinson died at Providence, R I, October 17 Dr Hutchinson lived in Minneapolis, 1870 to 1873 when he removed to Providence He was Assistant Secretary General of the Pan-American Medical Congress, and Vice President of the American Electro Therapeutic Association

Dr Moncrieff Drowned in Siberia —Word has been received here of the death of Dr D Scott Moncrieff, who was sent to Siberia under the auspices of one of the auxiliary congresses of the World's Fair The information came through Minister Dunn at Tokio, Japan who says Dr Moncrieff was accidentally drowned The State Department at Washington has also been notified —*Chicago Post*

Dr Algernon Sidney Coe of Oswego, N Y, died October 18 He was a surgeon of more than local prominence in the northern part of his State During the late war he served as surgeon of the 148th Regiment from August, 1862 to June, 1865, and did not lose a day in all those three years He was an alumnus of the College of Physicians and Surgeons, N Y, of the class of 1854

Dr John N Garnett, aged 73, died at Kansas City, October 14 Dr Garnett was born in Virginia He had been in Kansas City since 1879 and until of recent years had *practiced* medicine In his younger days he was a great sportsman and was known *as an expert with the gun* and rod Dr Garnett is the father of ten children, five of whom, three sons and two daughters, are still living His wife also survives him

Dr J S H Fogg died October 16 at his home in South Boston John Samuel Hill Fogg was born in Eliot, Me, May, 1826 He began the study of medicine with Dr Theodore Jewett in 1844, attending meanwhile the medical course of lectures at the Bowdoin Medical School, and later at the Harvard Medical School, at which place he took his degree in 1850 He at once opened an office in South Boston, where he remained until his death

In 1850 he married Sarah Frances Gordon, daughter of John Gordon, Esq, of Exeter, N H, who died in 1871 A year later he married Miss Mary G Clinch

Dr Fogg was a member of the Medical Society of Massachusetts, also a corresponding member of the Maine Histor*ical Society He was in the Massachusetts House of Representatives* in 1855, and was for some years on the School Board *of the city* He was a member of the Congregational Church

Dr John C Peters Passes Away —Dr John C Peters, the well-known authority on cholera, germ diseases and climatology, died on October 21 at his residence, "the Corners" at East Williston, L I He was 74 years old, and was stricken with palsy a short time before his death Dr Peters had practiced *medicine in* New York since 1842 He was born *in that city,* and educated at the College of Physicians and Surgeons and the *medical universities of* Berlin *and* Vienna. He was one of the founders and at one time president of the New York Pathological Society, and for many years was editor of the Society's proceedings He was the physician and personal friend of Washington Irving Dr Peters made a special study of Asiatic cholera and his library on cholera is said to be the most complete in the country He wrote many pamphlets on this subject He assisted Dr Edmund C Wendt in preparing a treatise on cholera, and in 1866 wrote Peters' "Notes on Asiatic Cholera," a standard work Dr Peters suggested new remedies in the treatment of consumption, Bright's disease and membranous croup

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BOOK NOTICES

The Southern Surgical and Gynecological Association Transactions Vol V 1893

This volume of this handsome series contains an account of the proceedings and the papers read at the fifth session of the Association, held at Louisville, Ky, Nov 16, 17 and 18, 1892, under the presidency of Dr J McFadden Gaston of Atlanta The papers in the volume include articles by Drs Gaston, Brokaw, Haggard, Baxter, Dugan, McMurtry, Horace Grant, Ap Morgan Vance, Wm W Potter, R M Cunningham, Howard A Kelley, Cartledge, Myers, Lydston, Taber Johnson, Bedford Brown, Jas Evans, Coe, Simons, Chapman, Stone, our *omnipresent friend* H O Marcy, and others One of the most interesting papers is by Bedford Brown, 'Personal Recollections of the late Benjamin W Dudley of Lexington, Ky, and of his Surgical Methods and Work" Dr Brown was a pupil of Dr Dudley from 1846 until the conclusion of his medical education, and was therefore in a position to know the great pioneer surgeon thoroughly If it be true that "no man is a hero to his valet," it is equally true that the old-time preceptor was sure to be *the* great man of his age to his pupil The following announcement will strike many as a revelation 'In the use of sterilized water as a dressing for wounds he had an abiding faith, and used it to the exclusion of all other dressings Not a drop of *non* sterilized *water* was permitted to touch a wound He believed that unboiled well *or spring* water contained poisonous materials, *the* nature of which of course was not well defined in his mind He contended that the purest form of water, next to boiled or distilled water, was that from the cistern, which was used exclusively *for drinking* purposes in his family and office His use of boiled water in all wounds, except *those* healing by first intention, was profuse and abundant" Our space s not sufficient to quote further from this most interesting paper, and we rise from its perusal with greater admiration for the surgical methods of fifty years ago, and regret that there were not more Dudleys in that period, now growing misty with the lapse of time Of the other papers in the volume it is only necessary to say that they are replete with scientific interest The general appearance of the volume is highly creditable to the accomplished Secretary, Dr W E B Davis of Birmingham, Ala

A Text-book of Ophthalmology By WILLIAM F NORRIS, M D, Professor of Ophthalmology in the University of Pennsylvania, and CHARLES A OLIVER, M D, Surgeon to Wills Eye Hospital, Philadelphia In one octavo volume of 641 pages, with 357 engravings and 5 colored plates Cloth, $5 00, leather, $6 00 Philadelphia Lea Brothers & Co 1893

This work is divided into two parts, of which the first is by Dr Oliver and treats of embryology, macroscopic and microscopic anatomy, physiology, optics, physiological optics, examination of the eye, ophthalmoscopy, fundus reflex test, methods of determination of errors of refraction and accommodation, and correction of errors of refraction and accommodation

The painstaking care with which the author has developed every detail of his subject, has produced a work which leaves little to be desired, there is no padding or redundancy, and there is an earnestness born of an intimate knowledge of the subject and a sincere desire to convey instruction

The second part of the work, by Dr Norris, treats of the diseases and injuries of the eye, the eyelids and the orbit, including the affections of the optic nerve and its internal prolongations The concluding chapter describes some of the more common and important operations on the eye In this section the same care has been taken to prune superfluities, and secure precision, as in the first, but naturally the author has more latitude of expression, owing to the nature of his subject

The illustrations are excellent and the typography good

Anatomy, Descriptive and Surgical By HENRY GRAY, F R S Lecturer on Anatomy at St George's Hospital, London, New American from the thirteenth enlarged and improved English edition Edited by T PICKERING PICK, F R C S, Examiner in Anatomy, Royal College of Surgeons of Eng and In one imperial octavo volume of 1,100 pages, with 635 large engravings Price with illustrations in colors Cloth, $7 00, leather, $8 00 Price with illustrations in black Cloth, $6 00, leather, $7 00 Philadelphia Lea Brothers & Co 1893

This well-known work on anatomy which has been the principal text-book in England and the United States for the last thirty-five years, has again made its appearance in a new edition, this time wholly English The Holden's Landmarks incorporated in the last edition have been omitted The changes have included the latest teachings on general anatomy and the development of the tissues No recommendation of ours could add to the already high estimation in which this book is held by the profession in America It has sometimes been said that there were many errors in Gray, but nevertheless they have grown fewer with each successive edition, and it takes such a hypercritical vision to discover them now, that like the spots on the sun the average man only knows of them from hearsay

A Hand book of Ophthalmic Science and Practice By HENRY E JULER, F R C S, Ophthalmic Surgeon to St Mary's Hospital, Surgeon to the Royal Westminster Ophthalmic Hospital, London New (second) edition, revised and enlarged In one octavo volume of 562 pages, with 201 engravings, 17 colored plates, test types and color blindness test Cloth, $5 50, leather, $6 50 Philadelphia Lea Brothers & Co 1893

This well-known work contains concise descriptions and typical illustrations of the important affections of the eye The different structures are treated of seriatim, commencing with the eyelid, and concluding with a chapter on diseases of the orbit The most extensive chapter in the book is that devoted to normal refraction and errors of refraction The consideration of the diseases of each structure commences with the anatomy and physiology of the part The illustrations are much better than are usually found in manuals of this character, and the colored plates are fine specimens of the chromo lithographic art In the appendix will be found useful formulæ, reading tests and test types

Essentials of Bacteriology Being a Concise and Systematic introduction to the study of microorganisms for the use of Students and Practitioners By M V BALL, M D Physician to the Eastern State Penitentiary at Philadelphia Second edition, with eighty-one illustrations, cl 16 mo pp 205, Philadelphia W B Saunders 1893

This little book having passed to its second edition, has its success assured in advance Bacteriology has made such rapid changes in the last year that a work on the subject needs frequent revision to keep in touch with the new discoveries The author says "In this second edition the results of last year's earnest work have been embodied The separation from the blood of antitoxines, and their application to the cure of disease will probably revolutionize our present method of treatment, and add some peculiar agents to our materia medica The question of immunity is still unanswered, though the phagocytic theory of Metschnikoff and the Alexines of Buchner are bringing us to the solution Upon these lines the greatest efforts are at present being made"

Johns Hopkins University, Baltimore Studies from the Biological Laboratory Vol V No 4 Baltimore 1893 Price $1 00

The contents of this volume are, 1, An undescribed Acranate by E A Andrews, 2 Contributions to the Embryology of Chiton, by Maynard M Metcalf, 3, The formation of the so called Cypress knees on the Roots of the Taxodium Distichum, by John P Lotsy, 4, On the Origin and Development of the Stichidia and Tetrasporangia in Dasya Elegans, by B W Barton This volume is edited by Prof H N Martin and Prof William K Brooks

Asiatic Cholera Its genesis, etiological factors, clinical history, pathology and treatment By JOHN A BENSON, Professor of Physiology and Associate Chief of the Department of Medicine, College of Physicians and Surgeons, Chicago Chicago The J Harrison & White Co 1893

This is a book of 248 16mo pages, in which the author has compiled in a series of lectures to his class, the essentials of the current teaching in regard to cholera It is well written and has been brought up to date The illustrations are cheap and poorly done, but as a whole the book is to be highly commended

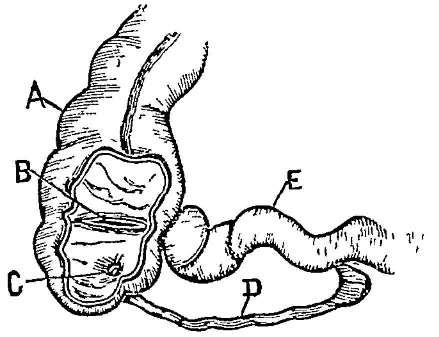
Minor Surgery and Bandaging By HENRY R WHARTON, M D, Demonstrator of Surgery in the University of Pennsylvania In one 12mo volume of 529 pages, with 416 engravings, many being photographic Cloth, $3 00 Philadelphia Lea Bros & Co 1893 Second Edition

There is little change in this work from the original edition published in 1891 The author says "The aseptic and antiseptic methods of wound treatment have been thoroughly revised, and a considerable number of new illustrations have been added"

SELECTIONS

Abnormal Appendix Vermiformis —So much surgical work is being done to day upon this part of the intestine that the following anomaly is worthy of notice the subject, a native of Germany, had died at the age of 63, of phthisis In dissecting the region of the cecum, I found the appendix beginning by a funnel-shaped opening at its lower and posterior portion, thence running over the brim of the pelvis, and terminating in a cul de-sac, which opened into the ileum about three and one half inches from the ileo cecal valve

Its appearance was smooth and bluish pink, about the size of a lead pencil, and measured six and one half inches in length It readily admitted a good sized probe at its termination in the ileum which passed into the cecum, There was no evidence of previous inflammation, and its mucous membrane seemed to be continuous with that of the ileum



A—Colon B—Ileo cecal valve C—Orifice of appendix D—Appendix E—Ileum

The specimen (which the accompanying engraving shows about one-fourth the natural size) may be seen in the museum at Cooper Medical College —Lawrence Boido, S B, in *Occidental Medical Times*

Hard Times and Free Medicine —From every part of this great and rich country, the news comes to us of extreme stringency in the financial position of our confrerés, the general practitioners Never was there a richer opportunity for the masses to play the pauper than now The present panicky state of the money-market affords people an immense excuse for wholesale imposition on the profession The conditions of the times will not give them free bread, free clothes, free transportation on the railroads or rent free, but they hie away to many of our too numerous hospitals and dispensaries for free treatment—advice, medicine and all included for nothing, or for “ten cents”—the figure fixed in certain palatial infirmaries

The consequence of all this has been most demoralizing to the profession and the public Practitioners reduced to a state of enforced idleness and grim want, are forced either to quit their profession altogether, or to “mee *steal* with steel,” to open rival dispensaries, to advertise, or to drift into downright quackery

Many cases have come to our knowledge which go to prove that the practice in vogue in many of our largest dispensaries is a species of downright robbery, and tends to work incalculable harm to the profession Case after case is taken from among people of ample means and turned over to the hospital or to the college professor for his clinic, without a word being asked as to their mendicity or ability to pay anything at all Cheap railroad excursion rates drain the outlying villages for miles in every direction

This hydra headed monster of indiscriminate free treatment must be seized and strangled, or we will soon see the profession of medicine dragged in the dust, open downright quackery will be rampant, and integrity and honor in the healing art will be things of the past

By no means let us withhold our services to the poor and deserving, for humanity compels us to gratuitously attend those without means Nor let us strip the field of such clinical material as legitimately belongs to the teacher, but let the teacher not forget that he has no prescriptive right to filch from the struggling practitioner what justly belongs to him —*Medical and Surgical Reporter*, Oct 21, 1893

Relative Values of Meat Extracts —In the *Public Health* for September, 1893, we find the results of an official analysis of several extracts of meat, made by Mr Tatlock, the public analyst for the city of Glasgow These studies form a part of the annual report of the Chief Sanitary Inspector, Mr Fyfe The desiderata now aimed at in the preparation of these food stuffs are, 1, a concentration or freedom from water, as great as possible, 2, freedom from fat, 3, palatability It is an error, held by very many that a given weight of meat extract may contain many times the nourishment of the same weight of meat This can not be, since no extract can possibly hold more than the total soluble parts of the beef, which are not more than one fifteenth part of the weight of beef itself The table given below contains a comparison regarding four specifically named extracts, and the analyst introduces his table with the following remarks

“In making a comparison of the relative values of these samples, it is only necessary to determine how far they comply with the above requirements Bovril does this within 20 per cent, but it is but fair that allowance should be made to this extent for water necessarily present to keep the extract in a soft state Liebig’s also complies with these conditions and even more closely, as this extract shows little over 10 per cent of water, but it is an extra dry one Valentine’s, containing as it does over 50 per cent of water, does not fulfill these conditions, so that after allowing for 20 per cent water, it might well be 30 per cent stronger Brand’s extract is scarcely an extract at all in anything else than the name as is obvious from the fact that it contains over 90 per cent of water, so that after allowing for 20 per cent water it might contain 70 per cent more dry extract of beef ”

	Per Cent			
	Bovril Fluid Beef	Liebig Co ’s Extract of Meat	Valentine’s Meat Juice	Brand Co ’s Essence of Beef
Water	20 42	10 79	51 40	90 48
Ether Extract	0 56	0 08	0 04	Trace
Albumen, Peptones and Gelatines	14 67	17 60	7 66	4 83
Creatine and Nitrogenous Extractives	37 01	42 20	18 56	2 98
Non Nitrogenous Extractives	8 00	8 59	11 96	0 47
Mineral Matter	19 34	20 74	10 38	1 24
	100 0	100 0	100 0	100 0
Total Solids	79 58	89 21	48 60	9 52
Weight of Sample	2 ozs	2 ozs	2⅓ ozs	2¾ ozs
Ounces of Meat from which the total sample is Derived	24 6	27 6	17 5	4 1
Pounds of Lean Roast Beef required to make 1 lb of Extract	12 3	13 8	7 5	1 5

MISCELLANY

New Medical College —The trustees of the Kansas Medical College met at Topeka, October 9, and voted to erect a new college building Francis Storrs, M D, was elected Instructor in Latin and G L Beers, A M, M D, Professor of Materia Medica and Therapeutics

Sir Andrew Clark —This well-known London physician was stricken with paralysis while talking with a patient, October 19 He was born Oct 28, 1826, and was graduated in Edinburgh The attack, in view of Sir Andrew’s great age, is considered serious

New York Post-Graduate Hospital —In the Court of Common Pleas, Judge Bischoff denied an injunction *pendente lite* applied for, to stop the erection of the new structure at the corner of Second Avenue and Twentieth Street The Court held that as the old structure had been occupied for many years for hospital purposes, without becoming a nuisance, the new building should be permitted to proceed

New Pasteur Institute at New York —On October 9 a handsome new structure was formally dedicated to this institution The building is of stone and brick, five stories high, and contains every appliance indicated by modern ingenuity for the relief of hydrophobic sufferers It is located at West Central Park and Ninety seventh Street It will remain under the control of Dr Paul Gibier formerly the Assistant Professor of Pathology at the Paris Museum, and since 1889 a resident of New York city The address on this occasion was delivered by Dr Ogden Doremus, who pointed out the necessity of supporting complete laboratories and infirmaries for those unfortunates who seek the Pasteurian treatment, and on account of diseases of the nervous system The private means of Dr Gibier, together with a few contributions from sections where the good results of the treatment have been gratefully recognized, are the sole source of present support Neither city nor national legislators have felt impelled to give any vote of assistance to this beneficent undertaking

Hospital Change —The patients were removed from the old City Hospital to the new hospital at St Paul, October 16

New Hospital at Lincoln, Neb —The Cottner Medical College has established a hospital in connection with their institution

Hospital for the Insane, Middleton, Conn —This institution is to have an annex at a cost of $100,000 that amount having been appropriated by the last Legislature

New Hospital at Champaign, Ill —A new hospital is to be established at Champaign, Ill A banker of that city starts the subscription with a check for $10,000

Proposed New Hospital, Chillicothe —The physicians of Chillicothe Ohio, E F Waddle, J M Leslie and others have urged upon the city authorities the establishment of an Emergency Hospital at Chillicothe

Foundling Hospital Closed —The San Francisco authorities have closed the Foundling Hospital on account of alleged mismanagement The infants still alive in the institution were handed over to the Sisters of the Good Shepherd

New Hospital at San Francisco —The new hospital annex of the Cooper Medical College of San Francisco will be opened some time next summer The building will cost somewhere in the neighborhood of $150,000 and will have a capacity of 100 beds

Landgraf Home and Hospital —Articles were filed in the County Clerk's office October 18, establishing the Alma Landgraf Home and Hospital of New York city The trusttees are Alma and John Landgraf, Runegrunde Sulzer, Mary Mecker, Emma and George Schmidt and Charles, Matilda and John Morgan

The Board of Managers of the Chester, Pa, Hospital met October 10, and in addition to reelecting the old officers of the Board, appointed the following medical staff for the ensuing year Drs J L Forwood J T M Cardeza, W B Ulrich, F F Long, S R Crothers, F R Graham, Ellen Brown, Hannah J Price, D W Jefferis, J M B Ward Drs Cardeza and Ward are new members of the staff, and take the place of Drs J Frank Evans and C W DeLannoy

Choked by a Sponge —A patient at St Joseph's Hospital, Syracuse, N Y while undergoing an amputation October 17, the throat filled with mucus and an attempt was made to clear the fauces by sponging The sponge slipped from the forceps and was drawn into the trachea by inspiration Tracheotomy was immediately performed and the sponge extracted, but the patient was fatally asphyxiated and did not rally

New Laboratory —The bacteriological laboratory of the Postgraduate Medical Department of the University of California is now fully equipped and ready for students It is under the direction of Dr John C Spencer, and is one of the most complete of its kind in the West

Dr S O L Porter, for the past eight years Professor of Practice at the Cooper Medical College has resigned his chair

The Charleston Medical College opened October 16 with an increased attendance over last year Dr F L Parker gave the opening lecture

Appointments —Drs Wm P Northrop, S T Armstrong and Albert I Swan have been appointed visiting physicians to the Contagious Disease Hospital on North Brother Island, N Y

The Schoolmaster Abroad —The Medical Practice Act of Connecticut, took effect October 1, and applicants for registration are numerous The following are reported as among the applications recently received, from which it would appear that the Examining Board has not commenced its labors too soon

'I taught first when I received your notice that your board did not register vetenary surgean, but I lernt cence that you do I practic foure years under other Doctors and Three years alone before I came to this state I have been Two years in this state I did not state that I had practiced in this state on the blank because I did not have an office her altho I have practice I have had at anavrag one case a week cence I have been hear"

Another produced the following

"I write to you to see if I can get a permit to put up a Blood medison maid of Herbs this has been my business for year and I intended to have wrote to you befour this but I have had a sick Lady to see to so I have not had time"

Both of these epistles were received from residents of the same town

Alvarenga Prize of the College of Physicians of Philadelphia —The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14, 1894, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered

Essays intended for competition may be upon any subject in medicine, but can not have been published, and must be received by the secretary of the College on or before May 1, 1894

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College, other essays will be returned upon application within three months after the award CHARLES W DULLES, Sec'y

Sanitation Mass Meeting —A sanitation mass meeting was *held in San Francisco on the 3d inst to consider leading* questions of sanitary reform The attendance was a large and enthusiastic one, and the meeting was addressed by leading physicians and citizens Dr Winslow Anderson, a member of the State Board of Health, read an able paper on "Filth Diseases Cholera Diphtheria and Typhoid Fever" He referred to the thoroughly organized defensive campaign of the Board of Health against any possible invasion of cholera "Inspectors," he said, "are ready at an hour's notice to go to any point of ingress on our borders, there strict quarantine will be observed, every case will be isolated disinfected, guarded We have the hearty cooperation of our chief executive, of all the railroads, and ample funds at our command should the emergency arise" Dr Anderson warned his listeners against over confidence in the peculiar situation and favorable atmospheric conditions of San Francisco, citing the great epidemics in Sweden and Russia as evidence that immunity from cholera is not dependent upon conditions of climate His advocacy of a new sewerage system for the city was enthusiastically received Matters of such grave moment to the people *should not be left, he said, to* supervisors and political jobbery, but to a board of men skilled and experienced in sanitary science

Choking to Death —A policy of accident insurance covered only injury or death received through external, violent and accidental means The insured lost his life by eating a piece of beefsteak that, in the attempt to swallow, accidentally passed into his windpipe, choking him to death in a few moments *That the policy covered such death was of course* denied by the insurance company But the Court of Appeals of Kentucky in a decision rendered Sept 16, 1893, (Amer Acc Co v Reigart, *23* S W Rep 191) holds otherwise *It says that it was only required that the means or* that which caused the injury should be external, and not that the injury should have been external, and that when the substance causing the death was visible and placed in *the mouth of the assured,* lodging by accident in the windpipe, instead of the stomach producing injury or death, it was as much an accident as if he had taken arsenic under the belief that it was some harmless medicine, which the authorities hold renders an insurance company liable While a *violent death,* as the term is used, is simply an unnatural one,—a death not occurring in the ordinary way

Must have a License —The Health authorities of Philadelphia have given notice that lying in hospitals in that city must hereafter comply strictly with the law, and such institutions must take out a license

The law passed by the Legislature and approved by the Governor was prepared by the Pennsylvania Society for the Protection of Children from Cruelty Its expressed purpose is to keep lying-in houses within sight and prevent malpractice and criminal operations at so-called maternity hospitals Major Veale, Chief Medical Inspector Taylor and Secretary Crew, of the Children's Society, are determined *to have the law's provisions carried into effect*

In order to secure a license application, in writing must be made *to the* Board of Health, to which the names of six reputable citizens must be appended testifying to the *respectability of the applicant* The house named is then to be visited by Chief Medical Inspector Taylor, who reports *to* Health Officer Veale, after which the Board of Health takes action The license is for two years, for which a fee *of $5 is charged*

Licensed institutions are furnished with blanks on which all cases looked *after are to be reported to the Health Office,* showing the name and residence of the mother, the date of birth of the child and the time and place of removal of the child

Public Health in Minnesota —September, 1893 The mortality record for August, 1893 (see page 72) 1,021 deaths is noteworthy as larger than the average of the same month for the last six years (1,016 8) and greater than the record of this month in any of those years except 1888 (1,415)

Looking for the cause—*Tuberculosis*—was much in excess of the average (109—92 5) and greater than the same month in any year except 1890 (115) *Enteric Fever* greater than the average of six years (48—30 5) or the same month of any year since 1887 *Diphtheria* was in excess of average of six years (30—31) and only exceeded by the record of 1888 and 1890 (40—38) Other diseases of the list are notably less than the average, but *Diarrheal Diseases of Children* caused greater mortality than for the same month in last six years, except 1888 (260 379) *Pneumonia* was much below the average of six years There has been a steady decline in the mortality from this cause *in August, since 1887 (31, 18 16, 14, 12, 11)* and the same is true of *Bronchitis* (13, 12, 11, 11, 8, 5)

Enteric (Typhoid) Fever made the following mortality record in 1892 as compared with 1891 and the average of six years (1887—1892)

DEATHS PER 100,000 OF POPULATION
Average in six years

	1891	1892	Avg of 6 yrs
State at large	41	30 9	42 32
Cities over 35,000	55 3	47 4	69 5
" 15,000 to 35,000	146 1	87 7	118 8
" 5,000 to 15,000	56 2	36 8	41 1
Cities and Villages under 5,000	29 4	21 8	29 8

In other words the mortality from enteric fever in 1892 was less in all classes of our population than in 1891, and than the average of six years It is but just to give separately the rates of the two cities which make up the second class (Winona and Duluth)

DEATHS PER 100,000 OF POPULATION

	1891	1892	Avg of 6 yrs
Duluth	214 3	123 82	172 1
Winona	21 9	21 9	20 14

Winona is located on a sandy gravel through which passes the cold and hard spring water from the high land to its rear, and the problem of disposing of excreta and garbage has been a *comparatively easy one,* as has *the introduction* of public water supply and sewer system Besides it has had for years a well equipped and active Local Board of Health and under the direction of Dr Franklin Staples as Health Officer

Duluth on the contrary is literally founded on rock, so that the introduction of public water supply and construction of sewers has been a very expensive and tedious labor The population in a limited area has increased with great rapidity and the city has, besides, to accommodate a large *floating population going* and *coming* from the mines and lumbering camps Despite these natural difficulties and secondary causes of enteric fever, under the vigorous and intelligent direction of the present Health Officer, Dr W G Goffe, the work of sanitary improvement has begun a marked and steady *reduction* of mortality from this cause, e g , the annual mortality for 1892 was 123 82 per *100,000 of* the population as compared with 214 3 in 1891

THE PUBLIC SERVICES

Army Medical Examination Papers at the Recent Examinations

ARITHMETIC

1 When the divisor and quotient are given, how can you find the dividend?

2 How many inches are there in 0625 of a yard?

3 What is the interest on $865 32 for 1 year, 3 months, 10 days at 7 per cent?

4 If 1 5 pounds of sugar cost $0 023 what will 25 pounds cost?

5 How many grammes are there in 7 2-5 pounds avoirdupois?

6 *Illustrate the* six principal forms of triangles

GEOGRAPHY

1 Give the boundaries of Italy by land and sea

2 Name the principal rivers *of India*

3 Through what States would you pass, going from St Louis to Mobile?

4 Bound Minnesota and name the capital

5 Through what States does the Connecticut River flow

6 Name the provinces of British America

7 Name those parts of the United States *where the* rainfall is unusually large

8 Give an outline of the indications useful in weather predictions in the Eastern United States

HISTORY AND LITERATURE

1 From what power was Louisiana purchased and in what year?

2 State what you know of the battle of Palo Alto

3 Who composed the first Roman triumvirate?

4 When and with whom did the Plantagenet line of English *sovereigns begin and end?*

5 What historian has the United States produced? Name at least one work of each

6 In what works do the following characters appear Ichabod Crane, Uriah Heep, Colonel Newcombe, Falstaff?

7 Who was Poe? When did he live and what did he write?

8 Mention the principal authors contemporary with Queen Elizabeth

PHYSICS

1 *What* is the mechanical principle of the pulley? What advantage is gained by use of a single pulley? What by a series of pulleys?

2 What is meant by the pressure of the atmosphere? Under what conditions does it vary?

3 What is an artesian well? What principle of hydraulics does it illustrate?

4 What fundamental laws of light are illustrated *in the* action of lenses?

5 What are the peculiar features of an insular *climate* and how are they explained?

6 Briefly explain the principle of the electric telegraph

CHEMISTRY AND TOXICOLOGY

1 What is meant by catalytic action? Give an example of this action

2 What is the atomic weight of sulfur? From what place is the sulfur of commerce chiefly derived? What is the symbol of the gas which it forms by its union with hydrogen gas? How is this gas prepared?

3 What is bleaching powder? What is its chemical symbol? How is it prepared?

4 Describe the chemical action which takes place when fragments of iron wire are dropped into hydrochloric acid When they are dropped into sulfuric acid When they are dropped into nitric acid

5 What conditions are necessary to the process of alcohol fermentation? Describe the process What are its products?

6 Describe briefly, Reinsh's test for arsenic

MATERIA MEDICA AND THERAPEUTICS

1 Give a brief account of the physiological action of atropin, and mention the diseases in which belladonna has been employed Give officinal preparations with doses

2 Contrast the physiological effects of the three most important anesthetics How are they supposed to act, and what are their relative dangers?

3 Enumerate the salts of potash employed as medicines Give dose and brief therapeutic indications for each of them

4 Mention the remedies which produce vasomotor paralysis as well as those which have the opposite effect

5 Give physical characters, source, solubility, dose and brief therapeutic application of aconitin, amyl nitrite, acetanilid, antipyrin and aristol

PHYSIOLOGY AND MEDICAL JURISPRUDENCE

1 Draw a diagram of the lateral surface of the left cerebral hemisphere (human brain) marking out carefully the cortical areas

2 Describe the minute structure of voluntary and smooth muscle, and state what physical and chemical changes take place in muscle during contraction

3 Describe the part taken by the pancreatic juice in the digestive process

4 Mention the important waste products of the body, give the quantity of each daily excreted, and state what organs are concerned in their elimination

5 In conducting an examination of the dead body of a newborn child, what circumstances would lead you to the opinion that the child had been born alive? What does the term, "born alive," imply in a legal sense?

ANATOMY

1 Describe the phrenic nerve, its origin, course and relations to other organs How does the right nerve differ from the left?

2 Describe the origin, course, distribution and exact relations of the median nerve

3 Describe the posterior tibial artery and its exact relations

4 Describe the popliteus muscle and its exact relations

5 Describe the ulna Give its relations in the arm Locate the areas of attachment of the muscles that arise from or are inserted into it

SURGERY

1 What is traumatic fever? How and under what circumstances does it occur and what causes it?

2 How do wounds heal? (Take this subject and write a brief account of what you know about it)

3 What are the symptoms, etiology and treatment of phlegmonous erysipelas?

4 What are some of the latest views on the surgical management of aneurism?

5 Describe some of the principal amputations done upon the foot, with illustrative diagrams

PATHOLOGY AND BACTERIOLOGY

1 Describe the microscopic appearance of a tubercle give its mode of formation and the subsequent changes which it may undergo

2 What pathological changes would you expect to find in the lungs liver, spleen and kidneys, in a case of long-standing obstructive lesion of the heart?

3 Give the histological characters of sarcoma

4 Mention several of the most important discoveries made in bacteriology during the period, 1880–1893

5 Describe the morphological and biological characters of streptococcus pyogenes What diseases are caused by this organism?

HYGIENE

1 What are the forces which occasion an upward movement of the air of a room or ward, through a ventilating shaft extending from the ceiling to beyond the ridge?

2 What kind of water or class of waters act most readily on lead pipes? What are the prominent symptoms caused by the continued use of water contaminated with lead? Could you discover whether lead was present in a given water? If so, describe the experiment by which you would discover its presence

3 What is meant by the siphonage of a water trap? How is it prevented?

4 Why are starchy and saccharin articles of food such as arrowroot, tapioca, etc , used so largely in the diet of sick persons?

5 What diseases or diseased conditions are usually attributed to exposure to sewer air? What are the constituents of sewer air, and which of them are the active agents in the production of the diseases you have mentioned?

PRACTICE OF MEDICINE

1 Give the clinical history and differential diagnosis of acute miliary tuberculosis

2 State briefly the causes, diagnosis, symptoms and treatment of acute pericarditis

3 What are the varieties and causes of jaundice?

4 What, briefly, are the causes, symptoms and treatment of acute nephritis?

5 What are the principal forms of insanity? What are the characteristic symptoms of, and what the prognosis in melancholia?

6 Describe the clinical course of a case of leprosy

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN

1 Presentation and position and relative proportions of maternal and fetal parts being normal, what causes may delay labor? Indicate treatment of one

2 Under what circumstances should version be performed? Briefly give method

3 What are the symptoms of placenta previa? How would you treat a case?

4 What are the supposed causes, the symptoms and the treatment of chlorosis?

5 What affections are liable to demand attention at the menopause?

6 What abnormal conditions, besides suspended animation, may require treatment in a newly born infant? Selecting most common, how would you treat it?

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from October 14, 1893 to October 20 1893

First Lieut A N Stark Asst Surgeon, now at Ft Clark Texas, will proceed at once to Ft McIntosh, Texas, and report to the commanding officer *for temporary duty with troops in the field at Carrizo Texas*

First Lieut Robert S Woodson Asst Surgeon U S A now temporarily at Ft McPherson Ga will return to his proper station Ft Barrancas Fla

First Lieut Merritte W Ireland, Asst Surgeon (Ft Apache Ariz Ter) is granted leave of absence for one mouth to take effect about the 20th inst

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LETTERS RECEIVED

(**A**) Anderson, Winslow San Francisco Ashmun G C , Cleveland O (**B**) Bates & Morse Adv Agency New York City Blackwell Emily New York City Ball R V Philadelphia, Pa Barker, T R Philadelphia Pa Brainard Mrs N I Osage, Iowa (**C**) Clark M S Youngstown, O Cantwell, A W Davenport, Iowa (**D**) Dunglison R J Philadelphia Pa Daggett Table Co , Buffalo N Y (**E**) Eskridge J T , Denver Col (**F**) Ferdinando H J Calcutta, India (**G**) Good Health Pub Co Battle Creek Mich Grigsby W E Blandinsville, Ill (**H**) Haldenstein, I New York City Hewitt C N , Red Wing, Minn Hummel & Parmele Philadelphia Pa Hill E W Newton Mass (**J**) Jones, A M Eaton O (**K**) Kahn Jos Milwaukee Wis (**L**) Loeb H W St Louis Mo Leffingwell H S , Milwaukee Wis Levy Robt Denver Col (**M**) Mettler L H Chicago, Ill Minor J C , Hot Springs Ark Marshall Printing Co Marshalltown Iowa Morse J C Buffalo N Y , Medical Echo Pub Co , Lynn Mass McFarland D W , Waterbury, Conn Morton T G Philadelphia Pa McLellan E A Boston, Mass (**O**) Oelrichs & Co New York City Owsley W T Washington D C (**P**) Peacock Chemical Co St Louis Mo Parke Davis & Co Detroit Mich (**R**) Raymond J H Brooklyn N Y , Robinson Pettet & Co Louisville Ky Rowell, Geo P & Co New York City Ravenel M P Charleston S C Reece Madison Abington Ill (**S**) Smith A J Univ of Texas Galveston Stockslager S O Boone Iowa Stearns Frederick & Co Detroit Mich Smith, Mrs B H Seattle Washington Smith Prescott Cincinnati O Stemis & Eastman Syracuse N Y Simms J R Racine Wis (**T**) Tracy E A S Boston Mass Taylor H L St Paul Minn Taylor J M Corinth Miss Town L S Geneva Mich (**U**) University of Buffalo Buffalo N Y (**W**) Wallace J S Brunswick, Mo Wiltrout J D Hudson Wis White J A Richmond Va Westlake, W B , Logansport, Ind (**Y**) Yates W , Chicago Ill

The Journal of the
American Medical Association

Vol XXI CHICAGO, NOVEMBER 4, 1893 No 19

ADDRESS

ADDRESS ON GENERAL MEDICINE

Read at the Meeting of the Mississippi Valley Medical Association, held at Indianapolis, Ind , Oct 12, 1893

BY JAMES F HIBBERD, LL D, M D
RICHMOND IND

Mr President —I purpose to call attention to four points in general medicine that seem to me to deserve a rehearing, more familiarity with which, I think, promises us higher satisfaction with ourselves and larger usefulness to our clients These points are

Progress of preventive medicine, biological law in its relation to medical science, cell place and power in structure and function, mind influence in pathology and therapeutics

On these points I present my individual views, I am not a teacher nor an expert student, have no authority to speak *ex cathedra* and do not assume it

PROGRESS OF PREVENTIVE MEDICINE

Preventive medicine in its wider sense includes all measures to maintain health instituted under hygienic regulations and sanitation, but I shall content myself on this occasion by reference to the management for the suppression of contagious diseases

ON CHOLERA PREVENTION

Ten years ago the only known means of preventing the invasion of any country or city by cholera was to exclude every person and thing contaminated by the germs of the disorder In 1884 cholera was epidemic and severe in Egypt, and was soon transported to southern Europe Germany, England, France and Italy each appointed a commission of practical medical men and expert bacteriologists to inquire into the nature of the malady, and devise means of prophylaxis No better illustration of the rapid progress of preventive medicine and the manner of that progress can be desired than a study of the methods of investigation pursued by those commissioners and the formulated results of their labors Their investigations began in Egypt, continued in Europe and were completed in India, where cholera has its continuous renewal and perpetual home The results of their labors were not entirely harmonious at first, but the unequaled Koch, at the head of the German commission, made a detailed report of the work and established the facts, the accuracy of which has been conceded by all parties

Accordingly, we now know that the cholera germ is the spirillum choleræ Asiaticæ—commonly called the comma bacillus of Koch—that it is found in the human body only in the intestines of its victims where it multiplies rapidly, that it is not communicated directly from person to person, but the alvine evacuations of the victims find their way, generally through water, into the bowels of susceptible persons, who then become additional victims, that this germ also finds a breeding place in damp soil and in stagnant pools and in running streams containing organic matter, and survives in pure water but does not multiply there, that it is virile only within narrow thermal limits, that it holds its life by a frailer tenure than any other equally prolific and destructive pathogenic spirillum, being quickly destroyed by the official germicides, by drying, by acids, and by a temperature below 56 degrees or above 126 degrees Fahrenheit

It is the application of this exact knowledge that has confined the cholera to the quarantine dominions at New York, thus preventing its diffusion in the United States, and it is a like application of this knowledge that has, on sundry occasions and at divers points in England and on the continent, enabled the authorities to confine the Asiatic plague to the single case in which it was discovered And, per contra, it is ignorance of these established facts, or failure to use them, that permits the ravages of cholera at this time in Arabia, in Russia and on the shores of the Mediterranean

Every practitioner of medicine in this country should feel it an obligation to constitute himself a propagandist of the knowledge of the means of prevention of cholera among the populace, and when the people are thoroughly informed in this behalf and join intelligently and heartily with the health authorities in recognizing and managing the first case that may appear in any locality, the disease will be stamped out at that point and then cholera can never again become epidemic in the United States

YELLOW FEVER

Yellow fever is another scourge that has been and still is being much studied, not with such satisfactory results touching the nature of its course as with cholera, but enough has been determined in regard to its nature to warrant the declaration that it can be stamped out at any point where it may appear. All that is necessary to protect us from further invasion of yellow fever is the watchfulness, the intelligence, the skill and the devotion to duty everywhere that has been so successfully exercised for eight years by the health authorities at New Orleans,

It is known that yellow fever is an exotic in the United States, and that it comes to us almost exclusively from the inter-tropical islands and mainland on the eastern border of the Western Hemisphere, and it is a reasonable anticipation that the diligent expert investigation now actively prosecuted will presently yield us such knowledge of the nature of its germ and its nativity, as will enable us to strangle it in the place of its birth The pregnant idea of dealing with germ diseases, that have a localized origin, at the point of their generation was under consideration by the Pan-American Medical Congress at its first session in Washington in September, and it is just such great orgaizations as that, composed of men with enlightened minds, and courageous natures, that will work out the problems of sanitary science and art for the welfare of the world

So far, we have considered prevention of disease on the line of keeping the susceptible people from coming in contact with the germs of disease, but there is another phase of prophylaxis equally important, namely, preparing people artificially, so that although they come in contact with pathogenic germs, they will be able to resist them and suffer no ill, i e , render people immune against contagious disease

The most notable example of this is the fruit of the acute observation of Dr Jenner in discovering, about one hundred years ago, that milkmaids who contracted cowpox were immune from smallpox, and the AMERICAN MEDICAL ASSOCIATION has done itself honor in providing for a Jennerian centennial celebration in May, 1896

The name of Pasteur need but be mentioned to recall the work he has done in the last decade, by virtue of vaccination against rabies in man, and inspired by the genius and success of Pasteur many experimentalists in recent years have essayed to render people immune against cholera, yellow fever, etc , by hypodermic injections of special cultivations of these germs respectively None of these efforts have, however, succeeded

A closely related line of experiments has been most diligently pursued by quite a list of distinguished investigators, in various parts of the world, based upon the theory that it is possible to produce, artificially, such a condition of the human system as exists after an attack of smallpox, scarlet fever, whooping cough or other contagious disease that attacks man but once Assuming that during an attack of such a disease there is something added to the system or subtracted from it, that renders it perpetually immune to that disease, the effort has been made to establish this immunity by making an equivalent change in the system by artificial means, that would not endanger life nor create serious suffering It will be observed that this is but a slight modification of Jennerian vaccination, closely related to Pasteur's arrest of rabic intoxication, and not remote from the idea involved in the original claim for Koch's tuberculin Encouraging progress has been made through experiments on the lower animals, but nothing definite has been accomplished in man

The concept in the premises may be illustrated by reference to what has been done to simplify and extend the Jennerian vaccination Dr Sternberg took the blood serum of a heifer that had had cowpox, and injected it into the system of a heifer that had not had cowpox, and thereby rendered the latter immune from cowpox, as was demonstrated by control experiments

From the result of this experiment, the inference is drawn that if the blood serum of a person who has had smallpox should be injected into the body of a person liable to smallpox, the latter would thereby become as immune against the smallpox as was the person from whom the blood serum was extracted If this inference be well taken, it would seem to justify the broad generalization that we are approaching the time when we may be able to render man immune against all diseases to which he is only once liable To accomplish this, however, even if it be within the limits of human effort, will require further study into the nature and function of ptomaines and leucomaines, toxines and anti-toxines, further allusion to which is not within the purview of this address

BIOLOGIC LAW

I submit this broad and comprehensive proposition, namely in the origin of man and in his development through his savage state, the Stone Age, his cave dwelling career, and up to his present enlightened status, every step has been taken, and every advance has been accomplished, in obedience to a law impressed upon matter in the beginning by the Creator This law is absolute and unvarying, it is the universal law of living things, known as the law of vitality

It has not been given to man to arrest, to abridge, to extend, or even to modify the law of vitality, but man has been given the power to change its application and direct its force even more strongly in a selected direction, and to soften its impulse in other directions, and this man may do to such an extent that the inexpert observer, and the illogical reasoner, may honestly conclude that the old law has been modified, or a new one made, but not so, in every instance when a new law of vitality has been announced, and the search light of scientific modes of collecting related facts and the inductive method of using them has been followed, the most obscure mystery has been found but a heretofore unobserved modification of the application of the normal law of vitality

A recognition of the universal law of vitality, as it applies to man, is the soul of scientific medicine, and the full service of science in medicine is to study the seemingly endless manifestations of vital law under diverse environment, and how its operations may be turned this way or that to ward off illness, to cure disease and to modify human suffering

It is not the duty, nay it is not even the privilege, of the true physician to question why the Creator in the plenitude of His omniscience exercised His omnipotence by impressing matter so that, in the presence of a certain environment, a limited number of the elements of the earth should combine and enter upon a new order of motion, known to us as vital activity in its simplest manifestation, and by orderly appreciation of substance and differentiation of force develop into man, rather than by an exercise of cataclysmic power have created man as he is to-day The *why* of what the Creator has done, is not a legitimate inquiry for the physician—it is the fullness of his mission to study the *how* of what has been accomplished

EVOLUTION AS LEGIBLE AS PRINT

But how do we know that man has attained his present estate, the highest exhibit of creative power, step by step, from primitive protoplasm?

The Creator has written the history of the origin and progress of vitalized matter in the rocks and their débris, in the ocean and its fauna and flora, in the rivers, their eroded channels and their deposited silt, in the wrinkles of the crust of the earth we know as mountains, in the fossils and the bones of extinct animals, in the preserved carbon of our coal beds, and in the living things that to-day inhabit the land, the sea and the air. The history thus written is as legible as print, and as veritable as the history of astronomy, by which we can predicate the eclipses and occultations of the planets for a thousand years, as surely as we know there will be an eclipse of the sun next Monday.

This development, from primary protoplasm to man, has been without arrest or shadow of turning, steady as the movements of the solar system, and to him who will reverently follow its progress there shall come a joy as satisfying and more real than the alleged music of the spheres.

There is no pretense that this harmony is recognized by every one who is called doctor, there are sciolists who practice medicine and practice a good deal of it, who honestly think they see in individual disease under certain circumstances, in localized epidemics and in the great waves of contagious disease that periodically enwrap the world, a wide departure from the law of human existence, as predicated by a beneficent and loving Creator. But while earthquakes and tornadoes, floods at one time and drouths at another, waste the products of the husbandman's labor and rob the people of proper sustenance and we acknowledge the Creator as the giver of the law that brings seedtime and harvest, governs the movements of the earth, and regulates all meteorological changes, we need not waste time to discuss the point with the pseudo-scientist, but turn him over to the logic of the poet who declares

"All nature is but art, unknown to thee,
All chance, direction, which thou canst not see,
All discord, harmony, not understood,
All partial evil, universal good."

CELL PLACE AND POWER

As already intimated, the immediate foundation of all living things is protoplasm, and I may now add that the cell is the primary form of organic life, and is properly recognized as the unit of vitality.

A single cell was the earliest form of organized matter and it possessed the attributes of selecting food, digesting and assimilating it, developing itself and propagating its kind. These are substantially all the attributes exercised by the highest organizations, albeit the wide difference in the manner and extent of the manifestations of these attributes sometimes requires the acumen of the trained scientist to recognize the major as nothing more than an amplification and differentiation of the minor manifestations. Present knowledge authorizes the declaration that all living things are single cells, or an aggregation of cells, with the products of cell metabolism or catabolism.

The history of vitality already recited, teaches that the first cell was a vegetal organism, complete in itself, and an essential condition precedent to the next step in advance, i. e., an organism of two cells, and this the progenitor of all subsequent organisms of more and more cells, presenting every conceivable form, glowing with every prismatic color and all possible combinations thereof, luxuriant in leaf, in flower and in fruit beyond the highest soaring of the human imagination, and to a size culminating in the sequoia gigantea, the great redwood tree of the snowy Sierras of California all cells, the simplest a single microscopic cell, the largest but a countless aggregation of cells.

It is worthy the attention of the student of scientific medicine, that all this extensive, varied and imposing development of vegetation is accomplished without the slightest hint of a nervous tissue.

The primal vegetal cell had made but limited advance when the environment, changing the application of vital force, produced a new feature in the cell organization that constituted the initial link in the great chain of the animal kingdom, quite as extensive, fully as variegated and more wonderful than the vegetal kingdom. The first animal was the similar of the first vegetable, in being a single cell, and the order of the development of the higher animal from a protozoa was identical with the development of the higher vegetation from the protophyte, and this fact is the clinching testimony that the Creator has but one way of building living things, of low or of high degree, and that is through the agency of the cell, the unit of vitalized matter.

Accordingly, we find that the present man perpetuates his species through a cell, the counterpart of the protozoa in which he originated. But in this sense man is a compound being, consisting of male and female, and for perpetuating the human race neither has any virtue without the other. The female in our climatic and other surroundings prepares, secretes, say 400 germ cells during the thirty years of her menstrual functioning, but these cells have no possibility of reproduction without encountering the sperm cells of the male who, in the sixty years of his virile power secretes millions of them, all waste material, except the few that meet the germ cells of the female in the interior of her organs of generation when, in such an event, there is not a simple embrace or union of the two, but an actual conjugation of them, each sacrificing its own individuality to constitute a new cell, having in it the potentiality of a human being.

The conjugated cell receives no additional powers or attributes, the act of conjugation completes all that is necessary to reproduce the likeness of its parents, except nutrition, and this the mother's womb furnishes and contributes nothing else. The conjugated cell at once starts on its career of development and in nine months has traversed substantially all the stages the protozoa passed through in the eons it occupied in developing into man. The story of cell place and power would have no pertinence to the service I have been called to on this occasion, if it were not that every pathological condition that besets the human organization is nothing less nor more than a disturbance of the normal activity of a few, or many of the cells of which it is composed, and when this pathological activity proceeds no further than to create error of function, the whole service of the medical attendant is to remove the cause or render the tissues insensible to its presence, and where the disturbing cause becomes a destructive agent, producing molecular death of a part, the sole reliance of medical science and art is to cultivate cell growth to fill up the void and reestablish the continuity of the tissues. The full recognition, by the medical fraternity, of the rôle of the cell in human economy will be an event to be marked by a white stone. Upon such recognition the future of medicine depends for rapid progress and true results.

MIND INFLUENCE

I may be doing my professional confreres an injustice by entertaining the thought, but I have a loose conviction that the influence of the mind over the physiology, the pathology, and the therapeutics of the body is less thoroughly understood, more inadequately appreciated and consequently more mischievously neglected than any other department of the healing art

The imagination will not only convince a man that he is ill when nothing is wrong but his imagination itself, but it will frequently magnify a slight ailment into a fancied fatal distemper, and a physician who does not discern these relations, or discerning treats them as a bagatelle, falls short of the obligations of his calling and fails in duty to his patients Much of the shortcoming in this department is probably due to the absence of a clear, concise and satisfactory definition of mind and of its relations to and association with, the nervous organization But the lack of exact knowledge on these points need not and should not prevent us from recognizing what is conspicuously plain to all who choose to observe and appreciate the constant phenomena of human life, namely, that the measure of the sanitary condition of every individual is the sum of his physical and psychical activities No man is well who thinks he is ill, and per contra, a man may have serious disorder of his physical organization and yet imagine his health perfect The laconic definition of a well man is "a sound mind in a sound body "

Beyond all peradventure, there are a considerable number of disorders in a limited class of people that can be relieved by so-called Christian science A disordered mind is as much a pathological verity as an inflamed lung A patient who believes he has a definite organic disease that he does not have is, nevertheless, out of health, but the disorder is in his mind not in his flesh, and will be restored as quickly, perhaps more quickly, by a qualified faith healer than by the most accomplished disciple of Esculapius Even where disease has been diagnosed and can be successfully managed only by medicaments, it must have been within the experience of every practitioner of even a few years' service, that a large percentage of the ailing will progress more satisfactorily if the patient has full faith in all that is said to, and done for him If to these patent facts we join the pregnant one, that many persons with diseases even acute ones of alarming presence, will be restored to health by natural processes without medicines, the assertion that persons claiming to be dangerously ill and recovering under the management of 'so called spiritual healing does not authorize the conclusion that the patient did not have threatening disease, nor does such recovery warrant the claim that the treatment was influential in the cure

All physicians are familiar with the nature and severity of the grosser developments of hysteria, but it should be fully recognized that from these typical cases there is a diminishing series to a vanishing point, and that the milder members of this series, while frequently independent, are perhaps more frequently complications of disorders not belonging to the neuroses, but which not only embarrass the practitioner in diagnosis and therapeutics, but induce him to administer perturbating medicaments where patience and placebos were the true remedies Indeed, it is just here where the professional sins of both omission and commission in daily routine practice reach their most abundant mischievous results

Much of the perplexity of comprehending the influence of the mind on the body, in all its vital operations is remedied, where one has acquired his knowledge of the nervous system through study of its physiology with a minimum of attention to its anatomy, and in this study made no attempt to unravel the complicated service of the encephalic ganglia in man until he has reached that highest evolution of the nervous system after inaugurating his study by a comprehension of its shadowy appearance in the protozoa, and following up its development, step by step, through all the links of the chain of changes from the protozoa to man By this line of investigation, much of the obscurity in the functioning of that part of the nervous organization peculiar to man, and especially of the gray matter of the cortex of the cerebral hemispheres which is the chief organ of the mind, is removed

To one thus equipped, the mystery of Christian science, of faith cures, of spiritualism as a medicine, of witchcraft, of mesmerism, of hypnotism and similars, is dispersed and leaves a mind thus clarified to walk the way of scientific medicine, cleared of the nebulous mists that hinder and of the clouds of doubt that confuse

To accept the vagaries of the professors of these occult arts is only to a degree more unwise than to deny or deride all foundation for them Both science and clinical experience, as well as common observation, confirm the existence of a varying psychic state under diverse names including spiritualism, mesmerism and hypnotism It is the reasonable duty of the scientific physician to winnow the two grains of truth from the two measures of nonsense in which honest ignorance and unscrupulous chicanery has enveloped it In this direction, Mr Ernest Hart has done a most excellent service, by investigating the hypnotic teachings illustrated by marvelous frauds in the great Paris Hospital of La Charité, conducted by Dr Luys of world-wide notoriety Within the current year, Mr Hart has presented in detail his method of investigation and its results, published in a thin volume in London, which has been reproduced in this country by the Appleton's of New York To persons who have only a hazy view of hypnotism, and to others who see it in full light but enjoy a cutting scientific exposure, without malice, of a charlatan who has long posed before the world as an exalted scientist, this little book will be a boon

I have covered my points, consuming my allotted time If I have seemed dogmatic the occasion offered opportunity for nothing more

Resumé —If I have been successful in an effort to make myself intelligible you will understand me to hold

1 That there is rapid progress in preventive medicine, that its present advanced status is highly appreciated, and that we may confidently look for yet brighter results in the near future

2 That our present concept of the complicated organization of the human body is based on the theory that the Creator, in the beginning, endowed vitalized matter with a perpetual law by virtue of which man has been developed, step by step, from primitive protoplasm

3 That there is no longer dubiety in the proposi-

tion that the cell is the unit of vital activity, and that all living things are a single cell or an aggregation of cells and cell products

4 That the influence of mind on vital activities, normal and abnormal, is not recognized as it should be, and that there is a line of study that would if properly pursued, dissolve the agnosticism that has in the past embarrassed a knowledge of the reciprocal relations of matter and mind

Doubtless you are ready, from sentiments herein expressed, to class me as an optimist, but I hope I am a reasonable optimist, holding my position consonant with demonstrated facts, an optimism that comes of attention to the progress of science, confirmed and brightened by my intercourse with my confreres under the best possible circumstances, namely, meeting them in great, enlightened and cheering associations like this

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ORIGINAL ARTICLES

METHODS OF TEACHING CLINICAL MEDICINE

Read before a Pedagogic Section of the Pan American Medical Congress, Washington, September, 1893

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Whether there is anything perfect in this world, I do not know That it is possible to improve the teaching of clinical medicine in this country, at least, I feel quite sure at the same time, also, I recognize the advance which is certainly making, and am convinced that this will continue We believe that the best is none too good for us, and propose to have it To hasten and secure progress in the future it is well to understand and consider the past, and the lines along which evolution has worked to bring us where we are We must also bear in mind the local conditions, with the advantages and disadvantages which they entail The problems are, to make the best of what we have got, to get more, and gradually to surmount the bars to progress, whether these are accidental or inherent in the spirit and institutions of the country

It is easy enough to see the advantages of governmental control of the higher education, as exemplified in European countries Professors are government officers hospitals and laboratories are built and maintained by the State All the parts which go to make a complete medical school should therefore work together like the parts of a machine, well oiled by National appropriations But it is not likely that we shall see any general adoption of this system, or anything similar to it in this country, even if it were desirable that we should

While the town or municipality properly insists on and provides for primary education with us, intelligent private liberality must in the future, as it has done in the past, provide in the main for the endowment of advanced and professional education Laboratories of all kinds, including hospitals, cost so much to build and maintain that no medical school can pay its bills from the tuition fees of its students, even if a self-denying and devoted faculty is willing to forego all direct pecuniary returns It is to the honor of this country and of American public spirit that there are good medical schools, the teachers in which have, from the start, adopted this unselfish plan of devoting every cent of surplus to improving the facilities for teaching

Without endowment it is impossible to provide all that is needed Endowments will not flow towards proprietary schools, which are exposed to more temptation than is desirable towards a lowering or half enforcement of standards They will, however, flow to schools which are really parts of universities, and I believe that we can rely absolutely on the intelligent private liberality of our citizens to provide all that is required But we must make our wants known, and indicate the means by which they can be best supplied Everything comes to him who waits

Allow me now rapidly to touch on the beginnings of medical education in this country, and the manner of its growth

Roughly speaking, a century ago we became an independent people, full of virile energy, and with ample opportunities for its exercise in the development of a vast and rich territory During the Colonial days we looked to the parent country for professional education, as well as for many other things With independence came an increased stimulus to provide more fully for ourselves The Medical School of the University of Pennsylvania had been already started That of Harvard began in 1783 with three professors Other schools gradually followed Medical education before this was obtained entirely from a preceptor, whose students compounded his pills and draughts, read such books as he had, drove about with him on his rounds, and assisted him in many ways, even to the care of his horse perhaps For many years after the establishment of medical schools, clinical teaching remained in the hands of the preceptor But it marked a distinct advance, when opportunities were offered to enlarge the minds of students by coming to a city and hearing the leading facts and theories of medicine set forth by broad men of large and varied experience Clinical teaching was then wholly derived from the private practice of the preceptor, systematic and didactic teaching formed the lecture course of the medical school The number of men who could get their professional education in whole or in part, in European capitals was very small

The medical school was a private institution, responsible to no one in theory, though the board of trustees of eminent laymen chosen to add respectability and eclat to the enterprise, sometimes proved to be masters where they were intended to be servants Or affiliation was sought with some existing university But this connection was generally a loose one, the university practically doing nothing but confer the degrees on those recommended by the medical faculty The schools were essentially proprietary This was the case at Harvard until twenty years ago, when the union became real and organic It is only two years since the College of Physicians and Surgeons of New York, became really a part of Columbia College

Medical schools antedated hospitals The largest cities in the country one hundred years ago were small, the population was practically native, and there were very few poor requiring hospital treatment The development of hospitals in this country, practically, is included within fifty years, when the stream of immigration began to change from a brook to a river Medical schools being essentially proprietary, and being active only a few months in the year, hospitals were a separate foundation and grew up under separate management, a misfortune which perhaps could not have been avoided under the circumstances, but a great misfortune nevertheless, and one which still weighs heavily on the great majority of the schools of the country Medical schools were founded by physicians, hospitals by benevolent laymen, always, it is true, with the active cooperation, and oftentimes distinctly as a result, of professional influence But the two were under separate management, and it was natural enough that laymen should consider the introduction of students in a hospital as a drawback, rather than a help to the patients, and that they should be unwilling to hand over the hospitals to a proprietary medical school, which could give no guarantee of permanency or of reasonable freedom from selfish action

Under this mode of hospital foundation, the service was divided up among the leading or most active medical men of the town or city If a teacher had a service of three or four months—the duration of an old-fashioned lecture term—he was satisfied Indeed, he, in common with the non-teachers, preferred a short term, as allowing more time for private practice, the emoluments of which he required as those of his teaching position were indirect and uncertain Thus arose a second great drawback to clinical teaching,—a drawback which is the more felt now that the older schools undertake to furnish entirely, or in much larger measure than formerly, the bedside instruction of the old preceptor

In a word, then, the two chief difficulties with which we have to contend in this country in developing firstrate and sufficient clinical teaching, are, the lack of complete union between medical schools and hospitals, and the system of broken hospital service Another and incidental disadvantage is the impossibility of calling clinical teachers from other places In the purely scientific branches, it is merely a matter of providing a salary, but the school which does not own its hospital can not provide the clinical teacher with a hospital service

It will, of course, be understood that I am speaking broadly There are schools in this country which own their own hospitals and can regulate the terms of service therein But I think I am safe in stating that, with the possible exception of McGill University in Montreal, there is not a single one of the leading schools which absolutely controls sufficient clinical material for the methods of clinical teaching which prevail at present, much less for such methods as we should aim to follow in the future The Johns Hopkins will start with a clean slate, on a proper system, and with every facility for the best and most thorough clinical instruction All friends of medical education must watch its course with the greatest interest Its success must stimulate other schools to make more of the advantages which they possess, and must strengthen their hands in the struggle to secure those which they lack

It must be added that in spite of the disadvantages under which we labor in this country, as a whole, the practical working of things is not so bad as might be expected The laymen who manage private and endowed hospitals are enlightened men, as a rule, and are realizing more and more that the interests of their sick charges, as well as the reputation of their hospitals, are subserved by the instruction which is carried on within their walls And I can see a current setting toward a diminution in the size of the staff and a consequent lengthening of the term of service

There is much more that might be said—and doubtless better said—on this broad theme of the relation of medical schools to universities and hospitals It is a fundamental question If we can secure and control further opportunities for clinical teaching, the subsequent details present no special difficulty

To a brief consideration of these details I must now pass on I do not know where and when the first Chair of Clinical Medicine, independent of that of Theory and Practice, was established in this country, and this little paper is written far from any medical center or books It is rather less than forty years since the Chair was founded at Harvard, and my father was its first occupant Since this time the increase in the amount of clinical instruction has been, on the whole, steadily progressive In the twenty-five years which have passed since the writer began to study medicine, the number of exercises per week in clinical medicine have been multiplied several times, and the four years' course the success of which must depend largely on clinical opportunities of all kinds, is bringing still further increase in amount with, it is hoped, some corresponding improvement in method

The clinical lecture to large classes in the amphitheater, which marked the commencement of instruction in clinical medicine, maintains and always will maintain a place Much instruction can be imparted in this way, with economy of time to the student and of teaching force to the school However careful and ample the drill of the individual student may be made, I believe that the clinical lecture will survive During a year a wide range of disease, as well as much of the variation of individual diseases, can be illustrated by patients drawn both from the wards and from the out-patient department The student is thus shown methods of diagnosis and treatment, his attention is called to the changes in structure and function which disease works in the living body, and the particular case can be made to illustrate general principles But the work is done for the student, and must be done for him, in the main The limits of an hour, and the enlistment of the sustained interest of the class, as a whole, do not permit the drill of one or two individuals whose profit is largely at the expense of the main body In many of the schools of this country clinical lectures to a full class are given in sufficient number and of high quality

What, practically, all the schools need most is the clinical drill of the individual student and a close contact between student and patient This implies a wealth of clinical material and a considerable number of instructors among whom the class can be subdivided, so that each can have the precious opportunity of observing and finding out for himself The ward visit is a valuable means of instruction in rendering it possible to see and follow out diseases and cases of disease which can not well be transported to the amphitheater But it is hard to make a ward visit profitable to more than a dozen students at once, and the management of an independent hospital is apt to look askance at a method which tends to increase and complicate the work in the ward in ways which it is not necessary to elaborate

There is one feature in particular of the English system of clinical teaching, which has always seemed to the writer most admirable Each student must serve a fixed number of months in the ward as clinical clerk, with certain cases for the care of which he is responsible under supervision, and with all the details and course of which he necessarily becomes familiar It is thus impossible for him to enter practice without any practical experience whatever, and, what is more important, he is forced to exercise his powers of observation for himself The identity of school and hospital make this system easily possible And yet it has not been attempted in European schools to any extent, as far as I know Anatomy can not be learned without dissection, chemistry, without laboratory work Nor can clinical medicine be learned in the best way without work in a hospital ward and out-patient room

It is possible that much use could be made of the sick poor at their homes under the charge of dispensary physicians, though there are practical difficulties in the way I believe that along this line lies the first present necessity and opportunity for development The recognition of the necessity is the first step toward the provision and utilization of the means

There should, again, be primary as well as advanced clinical instruction In the new schedule of studies under the four years' course now in operation in the Harvard school, this principle receives full recognition The course in the second year is entirely separate from that in the third, that in the third will be more or less independent of that in the fourth year Each student will have in his second year four hours a week, partly clinical lectures and demonstrations of semeiology and diagnostic methods, partly drill in small divisions in physical diagnosis, partly ward visits in the hospital The general scheme for the third year is to provide more advanced instruction in the wards and amphitheater, including therapeutics, as illustrated by the case or cases in hand In the fourth year it will be the aim to make the work as practical as possible, and give the student opportunities to apply and fix the knowledge which he has already gained, at the same time that he increases his stock by more intimate contact with disease

Many years ago my father introduced an exercise in clinical medicine which has become popular and been adopted by other departments in the Harvard school, to which it is still, as far as I know, peculiar It is called the clinical conference Each student in his final year is provided with a selected case, usually in a hospital ward, though sometimes in a dispensary district He is expected to visit and follow up this patient, and write a practical paper on the diagnosis, prognosis and treatment A month or six weeks is allowed for the preparation of the paper, which is then handed in and which counts a fraction toward the examination for the degree From these papers a selection is made, according to character and subject, and every week one is read by its author before the class and a number of instructors in the department The reader is then subjected to criticism and question by his fellow students and teachers On the preparation of these cases much pains is bestowed, and I think there can be no question that the exercise is a useful one It is a matter of honor that the work on the case should be really that of the student himself Under the four years' course, instead of one, I hope that each student may receive a number of cases to look up in this way

I believe that the future is bright with promise The progress in a century has been enormous At first we depended almost wholly on Europe or Great Britain for a firstrate medical education Then students crossed the water for clinical advantages in hospitals, as these were non-existent or small in this country Then a prime inducement was the chance for laboratory work,—physiological, pathological, histological, biological Just as our hospitals have become second to none, so will our scientific laboratories It will always be enlarging to the mind to visit foreign schools and study their methods But it is no longer necessary for the attainment of an excellent equipment, alike in practical and scientific medicine We should bear in mind the fact that we have many possessors of large fortunes, who will quickly see that in no way can they so usefully and with so much credit to themselves dispose of their surplus, as by promoting medical education within, as well as outside of hospitals But the matter must be laid before them, as it can not be expected that they should be familiar with the requirements of clinical teaching Who is so fit to explain the matter, and who can exert more influence, than the family physician? Even if a teacher himself, he can not be considered a specially interested party if he is an officer of a university, which goes on forever, and the management of which can be depended on to administer funds intrusted to it, strictly within the purposes and wishes of the donor

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RARE FORMS OF GOUT AND RHEUMATISM

Read before the New York State Medical Association, Oct 11 1893,

BY SIR JAMES GRANT, M D , K C M G

OTTAWA, CANADA

Mr President and Gentlemen —This I consider "a red letter day" in my professional life's work, and more particularly from the very fact of having received so generous an invitation, through the Secretary of your Association, to read a paper on this auspicious occasion We Canadians, as a whole, delight in noting the advance of our American neighbors, in almost every line of thought in medical and surgical science The assembled wisdom of this Association from the great State of New York, almost a kingdom in itself, is only an index to the intellectual power to day at work in almost every State of your prosperous republic How gratifying it must be to con over such names as Rush, Mott, McDowell Sims, Gross, Pancoast, Flint, Sayre, Thomas, Emmett, DaCosta, Bowditch, Goodell, Pepper, Weir Mitchell, Bull, McBurney and a host of others equally great, but too numerous to mention, who by their skill and ability have added luster to the name of America

To day I propose offering some observations on rare forms of gout and rheumatism, conditions not by any means frequent as to their occurrence

PNEUMONIC GOUT

The following brief notes are of a pneumonic form of gout, associated with slight hepatic complication

Case 1—H V , age 78 years, stout habit of body, not plethoric, but generally vigorous and accustomed to long hours of arduous official duty, can not trace gout to his ancestors and always lived well and liberally Feb 10, 1893, he was suddenly seized with acute pain in the right side of the chest, opposite the middle lobe of lung, with general malaise and rather severe cough No excessive flushes in the cheeks, the breathing was somewhat hurried, about 30 per minute, temperature 101½ to 103 degrees, and the pulse for several days ranged from 100 to 114 The cough after the first day, was associated with the expectoration of a thick, tenacious mucus and rusty colored, not uniform, however, in its character, but somewhat patchy as to the distribution of the blood through the tough sputum The left side moved more freely during the respiratory process than the right, and over and about the seat of pain in right side there was an evident area of dullness on percussion and yet the breath sounds were heard with a degree of almost unexpected clearness, with an occasional slight mucous râle The posterior aspect of the right lung held its ground, kept moderately clear and, in fact, the pulmonic trouble was chiefly confined to the lateral and anterior aspect of middle lobe and right lung Throughout, the sputa presented an unusually tenacious character, and up to the 21st of February exhibited a patchy, rusty and most peculiar appearance, after which date it became clear, but retained the sticky, glutinous peculiarity up to the 27th of February, when it subsided During the entire illness the pain in the side was not of the usual pleuritic type, but more of the burning throbbing, aching and piercing pain, and out of all proportion to the ordinary defined pulmonic condition From this well-known gouty diathesis, I was led to believe that the attack was really gouty in character, and informed the friends that metastasis to the feet of the lung condition, was not unlikely On the 22d both feet became very painful and swollen, a condition of system (as to his feet) he had experienced several times during the past ten years Almost immediately the lung improved in every particular, which quite settled the point as to the gouty character of this attack in the lung tissue as a primary development Throughout, the usual course of treatment was adopted, with the free use of elixir salicylate or lithia, and lithia water as well During the entire attack I saw no special indications of hepatic trouble beyond a degree of uneasiness about the liver generally Four years ago he had a well defined attack of jaundice, unattended by any anatomical lesion to account for its development, it was of short duration and passed off quickly

PERITYPHLITIC GOUT

The same individual whose case I have just cited was the subject of the following data

Case 2—Sept 10, 1892, age 77 years Almost up to the present attack he had been enjoying apparently good health, retired to bed this same evening, and in the middle of the night was suddenly seized with a severe pain in about the region of the appendix vermiformis attended with a sensation of throbbing, together with a degree of tension in this particular region, and which radiated more or less over the entire abdominal walls, considerable heat of skin with a degree of restlessness, general febrile disturbance, and a sense of uneasiness about the stomach with occasional vomiting Temperature 102 degrees, pulse 116, full and regular The pain and sensibility of the abdominal wall were chiefly over the ileo-cecal region The bowels were constipated and the tongue moderately coated with a moist white fur, pointing to evident gastric derangement Knowing the gouty history of this patient for some years, although not of an hereditary type, I suspected from the character of the pain—boring and gnawing, such as I had observed more than once in his feet—that it might prove a case of gout, of which there were well-defined results, such as tissue thickening about the tarsus and heels of both feet, owing to the deposition of gouty material during past years The fingers on both hands showed also evidences of disturbed chemistry in the system, resulting in gouty thickening in and about various joints The bowels, though at once relieved by an enema, still continued painful Linseed poultices were freely applied, sprinkled *with chloroform liniment*, and tablets of sulphate of morphia freely administered to relieve the intense suffering, which was so acute as to almost prohibit the most moderate bed clothing Salicylate of lithia and lithia water were freely given so soon as admissible, and the bowels were frequently washed out with warm water, which almost played the part of an internal poultice The pulse and temperature continued high for fully five days, when both gradually lessened in intensity, and about the sixth day pain was complained of in both feet, particularly about the toes, but not by any means as severe as *in the marked metastasis after the attack of pneumonic gout*

At this date there was a marked amelioration in the entire character of the symptoms, the abdomen became more flaccid and much less painful on pressure, and the decidedly *cakey area* in the ileo cecal region gradually parted with its suspicious outlook McBurney's appendix point was for days an interesting and instructive outlook, until rendered less attractive by the evident outcome of metastatic gouty action Undoubtedly there was well marked and circumscribed induration in the ileo cecal area The precise condition or character of this induration was difficult to define, and yet the rapid change consequent on metastatic action, pointed to gouty *deposition in or about the region of the appendix*, so peculiar and transitory in its manifestations At the end of three weeks an excellent recovery was made, and since that date there has been no recurrence of intestinal trouble

RHEUMATIC PERITYPHLITIS

Case 3—Miss T , age 12 years, vigorous and robust habit of body, conformation regular and organs, as a whole, normal prior to present attack, of a highly nervous temperament, but has usually enjoyed excellent health and spirits June 1, 1893, complained of pain and a sense of uneasiness in her feet, with a general feeling of systemic irritability June 3 was suddenly seized with severe pain in the bowels, but more particularly in and about the ileo cecal region where tenderness on pressure was most marked Fully two days prior to June 1 a sense of heat and feverishness were experienced, and prior to being under my care Temperature 102½ and pulse 120 The bowels were at once washed out by a warm water enema, which afforded much relief Hot linseed poultices applied, and placed on milk diet and an aconite mixture From June 2 to June 8 the pain experienced over the bowels was very considerable, and the tenderness so severe that coughing or stretching of the legs increased the pain in a most marked manner Turpentine enemata also afforded considerable relief June 4 there was a decided hardness, on moderate pressure, over the ileo cecal region, which gave one the impression that some tissue change had taken place, and the fact that rigidity in the abdominal walls was more marked on the affected side than on the other, led me to view the condition with a degree of suspicion although *the actual position of* hardness was a little lower down than McBurney's point For fully three days the temperature was over 102 degrees, on which account suppuration would not be an unlikely result June 7 the right shoulder, elbow and wrist joints exhibited well defined symptoms of acute articular rheumatism, these parts being painful on pressure, swollen and moved with difficulty Just in proportion as these, almost outside rheumatic conditions developed, the abdominal symptoms actually lessened in intensity and on the tenth day the entire features of the case evidenced a marked change for the better, no relapse being experienced whatever The question very naturally arises, What was the attack, and how developed? True, the recognition of appendicitis is not all that is needed In this case, almost from the first there was localized pain associated with tenderness over the region of the right iliac fossa and ascending colon, with well defined swelling, and for days the pain was so severe that it was increased at once by coughing or deep inspiration, and the almost constant desire was to elevate both knees to relieve suffering For days also there was entire inability to take nourishment, owing to attacks of vomiting The bowels were frequently injected with warm linseed tea, which afforded a degree of nourishment, as well as clearing the contents of the canal

In the last case I concluded there was lodgment of undigested material in the cecum, and most likely induced by inability to assimilate the food, owing to deflected *nerve power from over mental strain*, as is frequently the case in our schools and universities at the present day In the ordinary avocations of life we can trace the operations of like results, interfering seriously with the very principles of sanguinification and blood change

The next question is, How is rheumatism associated with perityphlitis? True, the essential cause of rheumatism is still a doubted point Errors in diet, as an etiological factor, have much to do with the production of both gout and rheumatism, and such strengthens the metabolic theory that rheumatism depends on a morbific material, produced within the system, the result of defective processes of assimilation True, Prout, Latham, Richardson, Mitchell and Dr William H Porter of New York, have thrown much light on the subject of rheumatism, and certainly the present case points to rheumatic complications as the outcome of defective assimilation, an important factor in its production Thus the chemical laboratory of the human system becomes disturbed, resulting in false products, enabling us to establish a connecting link between even perityphlitis and rheumatism In the structure of the intestinal walls there is undoubtedly a large amount of fibrous tissue, just as in the fascia and the tendons of the joints, and it is reasonable to suppose that these structures should be influenced in the same manner Assuming that the case under consideration was even quasi-rheumatic in its character, it affords one more illustration as to the importance of giving due consideration to the line of action embraced in medical or surgical treatment under like circumstances

In a recent paper by A Haig, M A, M D, Metropolitan Hospital, London, on "Gout of the Intestines," he states "that his chemical and experimental experience had led him to believe that a very large number of cases of colic, enteralgia, and enteritis, and cases which are clinically indistinguishable from typhlitis, are neither more nor less than a gout of the walls of the intestinal tube, or a rheumatism, as has just been defined" In Canada, as a whole, gout is almost an *unknown quantity*, except in occasional cases of an hereditary type Our people, in the midst of life's pursuits, live in a moderate way, which contributes greatly to the promotion of health On the other hand, rheumatism is of frequent occurrence The coldness of our winter climate, the occasional absence of flannel, and excessive exposure contribute to develop rheumatism

After noting the life history of many thousands of our lumbermen, I have been amazed at the few attacked by rheumatism Bread, pork and strong tea constitute their chief articles of diet and the general experience is that the tea enables them to digest the pork with remarkable comfort, and certainly after a hard winter's work they return home well-nourished and healthy in every particular These facts point to the importance of simplicity as to diet Our progenitors frequently attained the age of "three score and ten," nourished by grain ground between two stones As a rule, the present generation *live too fast*, resulting in mental strain and the absence of simplicity With greater attention to diet, simple in its character, in conformity with the normal functions of the alimentary canal, and the avoidance of alcoholic beverages, as a whole, I feel confident perityphlitic and appendix troubles, even unconnected with gout and rheumatism, would become less troublesome factors in the line of disease

To avert various irregularities in the alimentary canal, which if neglected, would undoubtedly lead to trouble in time, is as important as subsequent treatment, when the stage is passed in which the efforts of nature are powerless to afford relief What active agent in the system is more frequently tampered with than gastric juice, which requires a normal temperature to perform its part in the economy Ice water at the commencement, and ice cream at the end of a meal may be fashionable, but certainly not life preserving Unassimilated food makes its way to parts not designed by nature to transform and absorb, as the result, how frequently on percussion we find extensive portions of *bowel ballooned* by abnormal efforts to accomplish the digestive process Such conditions result from irregularities in living No portion of the alimentary canal is more liable to diseased manifestations than in and about the appendix, which is a species of loop-line to the digestive tract

Insurance associations can not note too carefully the probabilities of life in this connection There is still much to be accomplished, and let our medical education be so directed as to bring about simplicity in living, as near as possible, to the normal functions of our organs, and our generation will be greatly benefited

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RIPENING OF IMMATURE CATARACTS BY DIRECT TRITURATION

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY BOERNE BETTMAN, M D
CHICAGO
PROFESSOR OF OPHTHALMOLOGY AND OTOLOGY IN THE COLLEGE OF PHYSICIANS AND SURGEONS PROFESSOR OF OPHTHALMOLOGY IN THE CHICAGO POST GRADUATE MEDICAL SCHOOL OCULIST AND AURIST TO THE MICHAEL REESE AND GERMAN HOSPITALS ATTENDING SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY

Six years have elapsed since I first called the attention of the profession to my operation for ripening immature cataract During this time I have had excellent opportunities to study the indications for this procedure and to note its immediate and later effects I have made known my observations in three papers, and my main object in presenting another to-day is to call attention to a few more features and to elicit a discussion from a representative body of specialists

The most important question, the raison d'être of the operation will first occupy our attention Is the operation justifiable? Knapp in his paper on cataracts read before this section last year says "Preliminary ripening operations are, in my opinion, almost always superfluous I prefer the risk of extracting an unripe cataract to that of any ripening method with which I have become acquainted The leaving of remnants behind has, in the manner in which I operate, very little to signify Locked up in the capsule they produce no iritis, and can easily and successfully be dealt with by the secondary division of the capsule

"I avoid operating on cataracts swollen by imbibition They render the section difficult and rarely come out cleanly, whereas the immature cataracts, known under the name of nuclear sclerosis, if the anterior chamber is deep mostly, not always come out entire"

Hirschberg denounces all procedures for maturing lenses in even stronger terms In a review of his paper, "Ueber Kernstar Ausziehung," he says "I operate on all senile, nuclear cataracts past the age of fifty, as soon as the vision is decidedly diminished (erheblich beschränkt), that is to say, as soon as the patient finds no pleasure in living, and is no longer able to gain a livelihood by his vocation" Further on, he speaks of all operations for artificial ripening of the nuclear senile cataract past the age of fifty, as appearing to him not only dispensable (entberlich) but rather as unnecessary (unzweckmassig)

It seems to me that the opinion of these two eminent authorities voice the sentiments of opponents to artificial ripening the world over, and therefore I allude to these only

Evidently, Dr Knapp regards preliminary ripening as risky I agree with him that Forster's entails the danger of setting up an iritis which, although not of a serious nature, naturally may affect owing to the posterior synechia, more or less the execution of the subsequent extraction of the lens

That my method is absolutely safe when properly performed, has been proved by the absence of any *complication attributable to the procedure* In the twenty cases thus far reported, and the three to be mentioned later on, good results were obtained after delivering the cataracts The only danger Dr Knapp refers to is iritis This is obviously excluded when the iris is not mutilated or even bruised in the slightest degree

I have long ago abandoned iridectomy, and with the introduction of my trowel shaped spatula have secured the iris against all danger of mechanical injury Possibly the Doctor had also in mind, mishaps to the lens and suspensory ligament, although he makes no mention of these in his article Others have, however, expressed themselves in this manner in personal discussion with me As a rejoinder I can only point to my results, and again refer to the convincing argument employed in a former publication which reads as follows "As for the second series of objections, I can only reiterate that careful and skillful manipulation of the spatula in my hands has never been followed by any untoward symptoms, seemingly the most probable misadventure would be tearing of the suspensory ligament, and dislocation of the lens In two cases only, vitreous escaped due, however, to other causes"

I heartily agree with Dr Knapp in ascribing the injurious effects to remnants of cortex left behind after cataract extraction, and have consequently, until lately, performed peripheric capsulotomy in every case

Direct trituration of the lens breaks down and makes opaque the entire lens volume Later on, when extracted it ordinarily leaves in bulk, or if the softer cortical substance is scraped off by the corneal flaps this can be pressed out immediately after, en masse Consequently this danger is reduced to a minimum, and induced me in the last case to lacerate the capsule more extensively, in other words to make a T-shaped capsulotomy

In reference to Dr Hirschberg's remarks, I must emphasize the fact that direct trituration of the lens was not intended for the so-called sclerosed cataracts We all know that such cataracts never become thoroughly opaque, and that they can be readily removed as soon as they interfere materially with the patient's welfare 'But not all patients past the *age of fifty have sclerosed lenses* Furthermore, a great number are afflicted before they reach that age An opacity of the nucleus with a few broad striæ in the periphery may disable a person, or at least make life a burden and prevent him from following his vocation

Extractions of unripe softer forms of nuclear cataract, where fingers are still counted at ten and fifteen feet I regard as hazardous, especially so when we possess a reliable and innocuous method, by which the transparent lens fibers can readily be broken down and their connection with the capsule loosened.

Again, the patient may possess but one eye, reduction of vision equal to one-half places him within the boundaries outlined by Prof Hirschberg Would the extraction of such a cataract be advisable? I have vainly endeavored to learn the exact amount of opacity of the lens which must exist before extraction of the lens is considered feasible by the adherents of early extraction In other words, at what stage of immaturity do skillful men dare to operate?

Again, let it be understood that sclerosed lenses, such with fine striæ, or with none at all, and with a firm nucleus often of an amber color are not to be *considered in this connection* Cases with incomplete opacity of the anterior cortex, permitting fingers to be counted at three, five and six feet, can no doubt be safely removed in this condition of immaturity But I am in doubt whether the operation would be undertaken, when the lens is so unripe that not only a reflex but even a view of part of the fundus is visible Two of the cases reported later on were of this nature

I have made a number of experiments on rabbits, to determine in the first place the amount of pressure the lens will bear without rupturing capsule and ligament I also intended to study with the ophthalmoscope and later on with the microscope, the changes thus evoked in the lens My rabbit house was lately burglarized by street urchins and every bunny, nine in all, was carried off Two others succumbed to injuries caused by a blow on the back and one more escaped My investigations have, for the present at least, been brought to an untimely end

A few facts have been gleaned which may prove interesting. nine of the animals were young, perhaps five or six weeks old, three had reached the age of one year and were almost fully grown In ten eyes I introduced the spatula, after having chloroformed the animals, and made a corneal incision with a lance and subjected the lens to violent trituration The pressure I exerted was quite uniform, but rather severe, far more so than I would dare attempt in the human eye In some cases I wounded the iris with a knife, in others a prolapsus of the iris followed which I did not attempt to reduce The eyes were cleansed with a bichlorid solution and no farther attention bestowed on them In nearly all, a decided opacity of the posterior cortex was visible the next day In a few it extended to the body of the lens and then to the anterior cortex a day or two later In the majority of cases the bulk of the lens cleared up within ten days In two, not a trace of any abnormal condition could be seen and in the remainder more or less striæ were still visible weeks after direct trituration Secondary reaction ensued in a few, in those having prolapsed irides, but disappeared in a few days These incomplete experiments indicate that normal lenses of young rabbits will *stand very severe trituration without rupturing the* capsule or suspensory ligament They also indicate that changes (directly attributable to the massage) of a more or less permanent nature will appear in the normal lens

If similar experiments, with similar results, were undertaken on old rabbits showing senile changes, we could then draw more conclusive deductions regarding the immunity from danger of the senile capsule and suspensory ligament following massage of the lens

The cases I will now report were nuclear cataracts with broad striæ in the anterior cortex Two were senile, the other, that of a young man, cortical with a very small nucleus In all, a marked reflex from the fundus was obtainable, in the young man, a dim view of the lower part of the fundus could be seen None of these cataracts were ready for extraction, and I have grave doubts whether the gentlemen who advocate the removal of immature lenses would have considered them sufficiently advanced

Case 1—Theo T, aged 68, admitted into the Eye and Ear Infirmary, Oct 24, 1892 Senile cataract both eyes R E, mature three years History of amblyopia Simple extraction, October 27 November 17 Secondary capsulotomy V=20 200 with + 10 An ophthalmoscopic examination revealed choroidal changes L E, immature cataract of six months duration Could see enough to walk about the streets but not sufficiently to perform work on farm A dim reflex from fundus was obtainable My fingers were readily counted at eight feet It was only after long persuasion that he allowed me to triturate the lens December 1 He left the infirmary December 6, with instructions to return as soon as sight failed entirely in that eye He returned December 21, stating that for the week past he had not been able to count fingers The entire lens was opaque No iris shadow was seen He was only able to indicate the direction of the moving hand

I did a simple extraction the following day, December 22, and a secondary capsulotomy Jan 11, 1893, which resulted in V=20-40 with + 10 Slight choroidal changes were found in this eye also

Case 2—Alex F, aged 50, admitted Feb 19, 1893 Immature cataract of both eyes R E, V=20-200 L E, nuclear cataract Broad striæ in upper and outer part of cortex, lower and inner parts much clearer, permitting a dim view of fundus V= fingers at six feet I did direct trituration Feb 9, 1893 The lens soon became opaque March 7, the cataract being entirely mature and vision reduced to qualitative perception of light I did a simple extraction and later on March 16, needled He was discharged a few days later with V=20 20 with + 11 D ⊃ + 1 dcy axis 180°

Case 3—Martin DeYoung, aged 34, admitted Jan 3, 1893 L E, mature soft cataract, white small nucleus plainly outlined, had not been able to see during past four years R E, immature, small opaque nucleus Broad striæ running from equator toward center leaving clear space between, through which blood vessels in the fundus could be distinctly outlined Simple extraction was done on the left eye January 15 Secondary capsulotomy January 26 V= 20 20 with + 12 D The left lens was triturated March 25 The condition of the cataract was as indicated above Fingers were counted at five feet A few days later the entire anterior cortex had assumed a fine satin-like appearance distinctly visible by oblique illumination A month later the entire cortex had assumed almost a uniform white appearance allowing the small, yellowish white nucleus to shine through April 25, I performed a simple extraction The corneal incision was made throughout in the cornea The capsule lacerated in several directions The small thin nucleus was expelled with a mass of opaque cortex clinging to it, the remainder of the soft, cohesive cortical substance was readily pressed out with the spoon leaving a clear black pupil The eye made a rapid recovery with a slight anterior synechia at the inner edge of the wound The patient was discharged soon after with V=20 30 with + 12 D I saw him a week ago, a few shreds of torn capsule surrounded the clear pupil His vision was the same

In conclusion, I will formulate the result of my six years experience

1 Artificial ripening of cataracts is in properly selected cases demanded 2, direct trituration is preferable to other methods, it is easily performed by one possessing ordinary skill, 3, it is not followed by any untoward symptoms, consequently it is a safe and reliable procedure, 4, it is not indicated where sclerosis involves the bulk of the lens, 5, it is especially useful in senile cataracts with soft cortex, 6, the results of the massage are marked and rapid, 7, maturity of the cataract is usually induced in three weeks, often sooner, 8, very little discomfort is caused the patient aside from bandaging the eye two days, 9, at the subsequent extraction of the lens, the cortical substance is readily removed and dangers of iritis and suppuration of the corneal wounds are lessened

Dr Knapp—I have had only a very limited experience in ripening cataracts, but Dr Born, my associate at the New York Ophthalmic and Aural Institute, had ripened a certain number of cataracts according to the very method of Bettman and the results had always been good Nevertheless Dr Born has given up the ripening operation as being dispensable in almost all cases

Dr J L Thompson—Do you use a mydriatic before making the operation of ripening?

Dr Bettman—I usually use cocain

Dr Zeigler—I have performed direct massage of the lens for artificial ripening for cataract in two cases that I recall, and with excellent results There was no reaction The eyes healed in three or four days The cataract matured in about two weeks One was extracted safely at the end of six weeks, and the other in six months The method I followed, however, was that known as Förster's, in which I did a preliminary iridectomy, although I introduced the shell spatula through the incision into the anterior chamber, and made gentle massage of the lens by direct pressure on the anterior capsule of the lens This procedure is particularly applicable in those cases of slowly forming cataracts, where the vision of both eyes has become sufficiently hazy to interfere with the patient's usual occupation

Dr Jackson—Since the last meeting of the Association, I have resorted to the operation then described by Dr White for preliminary ripening in seven cases, six of which I have since extracted without any trouble and with good results Five of the patients were over fifty years old, the results were practically the same Immediately after the operation there was slight haziness of the anterior surface of the lens, which passed away in a few hours, and at the end of forty-eight hours no change in the opacity Within three to five days there was perceptible increase in opacity, and in from one to three weeks complete opacity The extractions were made at different times, from three weeks to six months after the ripening The reaction after the operation was very slight, little, if any more, than would be due to the tapping of the cornea alone The after treatment was simply the use of a mydriatic and keeping the lids closed for a few hours until the chamber was refilled The operation is certainly satisfactory in producing the result aimed at Yot I think that the chances are almost as good for extracting the lens without having produced this complete opacity If the opacity were great enough to make the extraction necessary, I think there is no condition of the lens where I would hesitate to do extraction, without any preliminary operation whatever

Dr Murrell—How long do you triturate the lens, and about how much pressure do you use?

Dr Bettman—I have explained the method several times and that is why I did not refer to it in my paper I simply make an incision in the cornea with a keratome, then pass the proper instrument into the aqueous chamber and make light pressure on the lens, rubbing it up and down, and from side to side for a short time only From six to twelve passes with the spatula will answer

Lack of time will prevent me from making any extended remarks I must take the next train for Chicago The great objection to Förster's operation lies in the fact that not only the lens but the cornea and iris also are subjected to mechanical irritation, which is apt to produce cloudiness of the cornea and iritis A further drawback is that the pupillary and coloboma areas become small after evacuation of the aqueous humor, consequently but a small surface of the lens is triturated The same objections hold good in White's operation, in fact a smaller surface of the lens is exposed, no iridectomy being made It is in my mind inferior to Forster's Dr Jackson is mistaken if he thinks the posterior surface of the lens is not affected by trituration In the first place it is known that the posterior cortex is much thinner than the anterior, furthermore, my experiments on rabbits have proven that the posterior cortex breaks down and becomes opaque sooner than the anterior

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REPORT OF A CASE OF EXTRACTION OF CATARACT IN A NEGRO SAID TO BE 116 YEARS OLD

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY FRANK TRESTER SMITH, AND B F TRAVIS
CHATTANOOGA, TENN

Easter McCullough, residing at 611 Cowart Street, Chattanooga, a very aged negro woman, was seen in the summer of 1892, with the usual history of cataracts in both eyes, both fully matured On functional examination the eyes seemed normal, save that the right pupil appeared a little irregular Her children were not willing that she should be operated on, believing that an operation would be the death of the old woman on account of her age In March, 1893, they concluded to have an attempt made to remove the cataracts The left eye was first operated on by Dr Smith who, after making an upward incision performed a small iridectomy and a linear cystotomy The cataract was then pressed out and the speculum removed After seeing that the eye was clean, a flannel bandage was applied The operation was without accident The incision was a little small but not enlarged Anesthesia with cocain Healing was slow The weather was damp and cold much of the time and the patient was bothered with rheumatic aches and pains and repeated colds

The result (with +11 D lens) finally showed a vision of 20-70, with a prospect of improvement from a secondary operation This result may be considered as very good, from the mental condition of the subject

A short time ago Dr Travis operated on the right eye, but the case is not yet far enough advanced to declare the result

As the only point of interest in the case centers on the age of the patient this question was investigated carefully The family insisted that she was 116 years old From the evidence of Dr T Y Park of St Elmo, to whose wife's aunt Easter formerly belonged, the conclusion was reached that she was about ninety-five The years do not always represent the age from a physiological standpoint Some men at fifty are more aged than others at sixty The woman was as aged as any one we have ever met The lesson in the case, which we do not presume to be new to the members of this section, is that old age is no contra indication to the operation for cataract

The operation has had a marked effect on the patient in another way, in that she has seemed to take a renewed interest in life She is in much better spirits, and bids fair to disappoint those who thought she had but a few months to live, and that it was useless to bother about such a little thing as the eyesight

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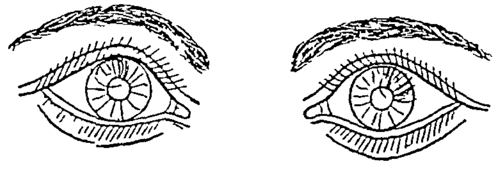
SYMMETRICAL DISLOCATION OF BOTH LENSES UPWARD AND OUTWARD CONGENITAL

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY LEWIS H TAYLOR, M D
WILKESBARRE PA

Mr Chairman —I desire to present a short account of a case of lens dislocation, because of the unusual position of the lenses, and because of certain interesting statements by the mother of the patient as to the possible cause of the difficulty



James McC, age 20, came to me Dec 16, 1892, to see if anything could be done for his eyes which had been bad since infancy V, O D 3 200, O S, 1-200 His mother states that he has always had very poor vision and she thinks that this condition has existed from birth He had rheumatism when 8 years old and has had heart trouble ever since He now has marked valvular trouble with hypertrophy The patient has a very peculiar, elongated face, with flattened nose

The ophthalmoscope shows both lenses symmetrically dislocated, upward and outward, about one-third of the diameter of each being visible beyond the pupillary margin Lenses partially opaque He selects O D + 11-100 + 1 50 cy axes 90, making vision 20-70 O S very uncertain and vision not improved with any glass Inasmuch as glasses improved his vision so much above his former condition, no operation was advised I have recently seen him and find vision O D 20 50, with his correcting glass, which he wears constantly and with comfort

His mother states that during pregnancy and one week before the birth of this son, she accidentally fell forward, striking heavily upon her abdomen This caused considerable pain, but she does not think that it hastened confinement as she was then very near full term The interesting question to consider, is the bearing of this accident upon the dislocation of the lenses in utero Inasmuch as the trouble has existed since birth, it is quite likely that the fall may have had something to do with the displacement of the lenses, though I am not aware that such an accident has been elsewhere suggested as a possible cause of ectopia lentis The mother is quite confident that this was the cause of the patient's defect Are we sure that the present case is congenital? Not absolutely, but in the absence of any history of traumatism since birth, and in view of the statement made by his mother and himself that his sight has always been poor, we are safe in assuming that the trouble was congenital

In two cases presented on the same day in Prof Jaeger's clinic, the notes of which were kindly given me by Dr Randall, Prof Jaeger held that the first was congenital, because both lenses were displaced inward and upward No 2, however, was regarded as probably traumatic, because both lenses were displaced upward and to the left, i e, one outward and one inward

Dr W S Little, in Transactions of the American Ophthalmological Society for 1883, reports two cases of supposed congenital ectopia lentis, the first being non-symmetrical, the displacement being upward, but with both lenses to the left In the second case the displacement was symmetrical, both being downward and inward In all of the traumatic cases that I have seen, the displacement has been downward, and this I believe is usually the case, though of course it may be in any direction

Dr J L Thompson—Were the lenses movable, and were they all turned upward?

Dr Taylor—The lenses were fixed, and were turned upward and outward

Dr Knapp—I had a very interesting case of outward dislocation of both lenses When I saw the patient he was 30 years old His mother had the same trouble, also a nephew and two nieces He had tetropia quadruple vision, i e, double vision in each eye and he squinted One image was formed in each eye by the light passing through the cornea and lens, and the other by the light passing through the cornea alone In each eye he thus had, simultaneously, myopia one fourth and hypermetropia one fourth By giving him either a concave or convex glass of one fourth, the one image was made sharp while the other became so blurred that it disturbed him but little In this way his tetrophoria was reduced to diplopia, and this by a squint operation to single vision It was one of the most singular cases I have ever seen I mentioned it in some publication but have forgotten where

Dr Taylor—In this case the lenses were so far drawn to one side that the patient has accustomed himself to look through the pupillary space, not occupied by lens, as if he had been operated on for cataract I saw the father of this family and found he was highly hypermetropic, but with no dislocation of the lenses

THE PERNICIOUS INFLUENCE OF ALBINISM UPON THE EYE

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY GEORGE M GOULD, A M, M D
OPHTHALMOLOGIST TO THE PHILADELPHIA HOSPITAL

I have had the good fortune to examine and treat the eyes of two families of albinos, and the results of my studies have led me to some conclusions that I trust may be of interest and value to the profession, and may ultimately be of benefit to these most unfortunate beings

I shall first describe my cases the first family is composed of rugged, healthy, normal parents, of American descent and birth, the father a strong and robust farmer, the mother an equally well-developed woman, who has borne seven children, all living and healthy, now ranging from the ages of four to twenty two The most diligent inquiry has failed to elicit a single instance of albinism, or of pathologic taint in the ancestry of either parent, there has been no intermarriage of cousins, and nothing to lead one to suspect syphilis, intermixture of negro blood, other dyscrasia or disease-abnormality, to which albinism has heretofore been blunderingly ascribed

Parents and children are all honest, hardworking, simple countryfolk, and all are remarkable for a sturdy development, a largeness and healthfulness of body, and a freedom almost remarkable from any illness during the life of each The parents show no trace of albinism, no abnormalism of skin, hair or eyes Their refraction, barring beginning presbyopia, is as near emmetropic as we can find, with no hyperopic astigmatism at axis 90 degrees

Case 1—The oldest child, W T, a lusty fellow of 22, about six feet tall, big boned and of rugged health, presents the typical characteristics of albinism As to the eyes, he has great photophobia, a rapid horizontal nystagmus, and an amblyopia of 20 100 each eye, and a simple hyperopic astigmatism of 5 D, (right eye) 4 D (left eye), axes 90° There is possibly some divergent strabismus of the right eye

Case 2—The second child, L T, a girl of 20, albino, with nystagmus and photophobia, rivals her brothers in physical vigor and development The refraction is R + sph 5 00 D, ⊃ + cyl 2 50 D axis 100° = 20-100 L + sph 2 50 D, ⊃ + cyl 2 50 D, axis 90° = 20 100

Case 3—The third child, L T, a big man of 18, shows no sign of albinism, and has a low degree of hyperopia, with no astigmatism or other ocular abnormality, structural or functional

Case 4—The fourth child, E T, a girl of 15, a pure albino with great photophobia and swift nystagmus has the following error of refraction R — sph 2 50 D, ⊃ + cyl 1 50 D, axis 90° = 20-100 L — sph 2 00 D ⊃ + cyl 1 50 D, axis 90° = 20 100

Case 5—The fifth child E T, aged 11, a pure albino, of less robust physical vigor than the rest, has a simple hyperopic astigmatism of about seven dioptres at vertical axes, and a visual acuity of about 10-200 or 20 200, with swift nystagmus and photophobia

Case 6—The sixth, L T, a girl of 8, not albinotic, has an inconsiderable hyperopia and a very slight astigmatism

Case 7—R T, *the seventh child, a boy of 5, is not an albino*, though there is faulty opacity of the iris, with some *slight nystagmus and a hyperopia* of perhaps two or three dioptres

In the second family I have examined, the non-albinotic parents are of as good stock, and of as perfect healthiness, both general and ocular, as the first family There have been but three children born, all good specimens of physical vigor

Case 8—The oldest child, a boy of 12, is a pure albino, with 2 D of hyperopic astigmatism (axes 100°, and 80°) on top of 5 D of hyperopia, 20-200 vision, nystagmus and photophobia, with moderate convergent strabismus of the right eye

Case 9—The second child, 10 years of age is not albinotic, and except a little hyperopia, presents no ocular abnormality

Case 10—The little girl, aged 4, is not quite the purest type of albinism, has moderate and slow nystagmus and as near as ascertainable, a compound hyperopic astigmatism of 2 or 3 D

Heredity, so powerful in all other factors, physiological or morphological seems, at least in the human race, to play no part in the production of albinism In the literature I have examined this seems very evident Darwin speaks of a family of albino children whose parents were first cousins, but this was certainly accidental, and can not be accounted as causal In animals there are a number of species of albinos, in which the hereditary element is indubitable The noteworthy fact concerning my two families is that albinism appears without any discoverable cause, and writers generally agree that this is usually so Not only does the affliction strike a family like lightning out of a clear sky, but, as in both my families, there is an unaccountable alternation of albinotic and of naturally pigmented brother or sister It is evident that here is an inviting field for investigation and even of experiment

Physical and Mental Vigor—The old notion that albinism is due to some general pathological element or dyscrasia, is likewise false From other reported cases and from my observation, the exact reverse seems to be the truth In animals and men, albinism is apparently bound up with exceptional health and robustness The idea also that it coexists with cerebral or mental deficiency or disease is just as untrue This statement, however, requires an important modification Biologically, vision is the very condition of mental development and existence, and with the necessary limitations the law holds as to the individual Nothing more certainly and more thoroughly affects the mind than ocular disease or the deprivation of vision, and the highly abnormal vision of the albino is most profoundly active to hinder and abnormalize the mind, thus denied its most important means of knowledge of the external world In this connection, however, the all-important point is the method or manner in which ocular disease produces mental abnormalism

The Family Study, gives the best field of suggestive observation because, from the babe to the adult, the progress of the morbid changes can be traced and a logical idea is thus gained of the influences and laws at work Many brothers and sisters may in this way be correctly focused, as it were, into one beam of light, or considered as phases or aspects of one personality and one law, the masse and unitized results standing out in more perfect relief

Since the present writing is to be rated mostly as a suggestion to others of a fertile field and method of examination, I shall briefly state what I tentatively hold to be the law of the causes and of the effects in these cases, in order to solicit from others corroborative or contradictory facts whereby a neglected class of medical cases may be understood, and possibly much suffering forefended I say much suffering, because if one may hazard a guess it would be that there are thousands of albinos in the United States, and for this frightful affliction I can not learn that ophthalmological science has either sought to learn the pathology of albinotic diseases, nor has ophthalmological art turned a finger towards their prophylaxis and therapeutics

The Cause of Albinism, in the present condition of our knowledge, is entirely undiscoverable The failure of the epiblast to secrete the usual pigment cells is a mystery of molecular physiology that the future must solve

The Pathological Significance of Albinism lies, I believe, solely in the fact that the iris or diaphragm of the ocular camera is transparent, or so nearly so that it does not act as a true photographic or physiological diaphragm The white hair and skin that so vexatiously attract the attention, have for the physician and for the patient absolutely no medical significance, except as regards the transparency of the lids The skin and hair are in every way as healthy as other hair and skin normally pigmented, and serve every function quite as well But I would also advance the theory that the absent pigmentation of the choroid has also little pathological significance, except as permitting trans-scleral illumination In many blondes the retinal or choroidal pigment is almost or quite as fully absent as in albinos, but the iris being properly pigmented, there is no ocular disease From non-opacity or non-pigmentation of the iris follows the entire train of evil results that afflict the albino, and from this slight cause alone What are the evils?

Photophobia is the most evident and inevitable consequence of a transparent iris [1] If one has endured the misery of mydriasis during a sunny day, and without the protection of colored glasses, he will have a vivid knowledge of the retinal torture that the albino must always endure With prolonged habits of eyelid and face protection, and with the wise adaptations and compensations that living tissues somehow learn, albinos, or some of them at least, develop a partial and suffering indifference to light, but most of them present the constantly painful picture of bowed heads downcast eyes, wrinkled brows and lids a vain endeavor to shut out the ill-defined and overpowering light rays pouring into the retina from all sides, and which not even the lids and sclerotic can exclude as our normally-colored lids and scleras do

Nystagmus —The existence of Miner's nystagmus, concerning which there has of late been much discussion, has served to show that these oscillatory motions of the ball are not primarily due to central disease It is evident that the exciting cause is the occupation and the effort of healthy cerebral centers to compensate for and overcome the peculiar and abnormal ocular labor We have somehow grown up with the idea, unconsciously accepted, that nystagmus is always a disease, and that it starts in abnormal function of the motor centers for innervation of the external ocular muscles But in albinos the brain is strong and healthy, it is only the eye that is abnormal The source of the nystagmus is, I firmly believe, in these cases not central, but is peripheral, and primarily it is only a physiological attempt of the ocular mechanism to find a less faulty and blurred image of an object Every ophthalmic surgeon has time and again seen nystagmus in the making Children and others with corneal ulcers, or extensive maculæ of the corneæ, in searching for the diffused and faulty retinal image are constantly sweeping the eyeballs about and from side to side, in the desperate and never-to-be-renounced endeavor to locate the hazy and non-limited images Cooperating with this cause is probably the attempt, constantly renewed, to throw the poor image that is formed, upon a less illuminated portion of the retina than the macula-region, in order thereby to secure a better contrast or definition Snow-blindness and moon-blindness, as well as our daily experiences, show us that with continuance of stimulus the retina tires Continuous exposure of the retina to light exhausts the molecular agencies, the delicate anabolism, and wears out sensitiveness In the general illumination of the fundus of the albinotic eye, there is then a diminished excitability and a fierce war against the constant and powerful stimulus Nystagmus is simply the attempt to give one part of the over-stimulated retina a rest of a fraction of a second, to give it time to build up its katabolism again, to locate the image upon other percipient elements that have had that rest and whose anabolisms therefore are not quite so exhausted or depleted The peripheral portions of the retina are more shaded and the attempt is made to throw the image on these portions The retina can never renounce the Sisyphean task of hunting for a more sensitive and darkened portion of its surface, and for a picture with a better definition In this sense and at first, the nystagmic motions are simple physiological endeavors to locate an almost non-localized picture, and to definitize a suggested and ever borderless image I take it that Miner's nystagmus is due to the forced repetition, a million times a day, to locate a fluctuating, dim and ever disturbed retinal image In albinos, the lens and dioptric media give the persistent hint rather than the sharp reality of a retinal picture, which the iris transmission of the peripheral light as certainly spoils, washing out its outlines and bathing the whole fundus oculi with ill-defined images and confusing brilliancy Thus, like blind men's fingers that grope after hoped for support and defense, the eyeball is kept constantly fluttering between hope and renunciation, in its ceaseless necessity of search for what can never be found When abnormal function passes over into organized habit and pathologic tissue change, just when physiology becomes pathology, just at what time of life the proper image-definition, if it were possible to supply it, would stop the nystagmus, must be decided by future discovery and experiment But I believe there is little room for doubt that the cause of the nystagmus is the definitionless image and diffused illumination of the fundus, caused by the transparency or translucency of the iris This may be more than suggested by the removal of the iris in a pig's eye, and seeing the effect on the fundus image, or by diaphragmatic experiments with a camera obscura, or with the artificial eye of Perrin or Frost The theory is about proved by the observation that in a family the nystagmic movements are slowest in the younger, and in the less albinotic irides, and are rapid in proportion to the increase of age, and of albinotic and ametropic defect The clinical proof of therapeutics yet fails from the too evident present difficulty or impossibility of making an artificial iris, or of definitizing and delimiting the retinal image But I have not yet despaired of this

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[1] In the autobiography of the late Lord Sherbrook of England who was an albino we have an account by a great man of his sufferings from this defect ' The peculiarity of my eyes consists in the total absence of coloring matter this occasions of course, especially in a man a very marked peculiarity of complexion amounting in youth to something of effeminacy For this evil however, I have found age a sovereign cure but as the absence of coloring matter extends to the eye it necessarily occasions a great impatience of light The eyelids must always be nearly closed and so I have never been able to enjoy the luxury of staring any one full in the face Of course this intolerance of light must be attended with something very closely approaching to pain I can not even conceive the state of a person to whom sight is a function free from all pain and distress but as I have no standard to measure by, I may exaggerate my own misfortune

Ametropia—It is commonly said in the copied, rote repetitions of the books, that the albinotic eye is a diseased eye, the lens malformed, and everything wrong about it It is my belief, as I have stated, that primarily there is nothing wrong with the albinotic eye except simple want of iris pigment, and that all its other evils flow from this as a sole cause All the albinotic eyes that I have seen are beautiful and perfect structures, except as regards this pigmentation The scrutiny of my cases and the comparison of each member of the family group with the whole, and with my theory as a key, goes far to prove my contention Doing this, it is observed that the more transparent the iris and the older the patient the greater, other things being equal, the ametropic defect And this is very readily explained by the influence upon the eyeball of the persistent lid pressure and blepharospasm, the cheek and forehead muscles also cooperating, together with the powerful retracting forces of the external globe muscles The brilliancy of diffused fundus illumination is thus only partially lessened, but the attempt must always be kept up, even though the folded and wrinkled skin by its translucency can not wholly effect the desired exclusion of light Age also has its influence, as the longer the lid pressure has been kept up, the greater is the ametropia, and especially the hyperopic variety of astigmatism It is the axis of this astigmatism that also helps to reveal the nature of its cause The influence of the spasm and crushing of the lids is seen only by noting that no ametropia exists in the parents, none, or comparatively none, in the non albinotic children, more hyperopia, or rarely myopia, in the younger albinos, either of the less pure type or of relatively less physical stamina, while we have enormous degrees of hyperopic astigmatism about axis 90 degrees in the older and stronger The lids have crushed the eyeball so continuously that we have extreme corneal asymmetry at axis 90 degrees[2]

Amblyopia need not detain us long to explain It is also secondary The unphysiological image stimulus, and the nystagmus would in time necessarily bring about lessened visual acuity, even if it were not directly and at once the result of the diffused illumination of the whole retina, and especially of the macula-region Continued over stimulus and abnormal stimulus everywhere destroys physiological reaction and blunts the delicacy of sensibility

The combination, photophobia, nystagmus, ametropia (often also insufficiency or strabismus), and amblyopia, presents a union of four frightful ocular defects that leaves little to add of worse It is interesting to distinguish how each is causally bound up with the other, and that there is thus formed a vicious circle of disease that tends to enlarge and increase in virulence so long as the tissue changes of the growing period of life render the ingravescence possible But I wish to emphasize again my conviction that, each and several, these four things are directly or indirectly due to the one etiological factor, a non-pigmented iris A non-pigmented choroid and lid exaggerate the evil

Prophylaxis and Treatment—If this be the true etiology, what will be the logical attempt at therapeutics? It is evident that, as all true cure aims at extinguishing the cause of the disease, so here the one hope of individual prophylaxis and cure must lie in supplying either a pigmented iris, or an artificial substitute for the same

As all abnormalism of so constantly reappearing a kind as general albinism of the body must have a definite cause, we are compelled in default of present knowledge of that cause, to wait further scientific discovery before the prophylaxis or cure of this developmental epiblastic peculiarity is possible In the meantime, the reported changes in individuals of pigmentation, both away from and toward albinism, give us hope that the law may be discovered, and that even a general cure is entirely possible and yet to be discovered by some brilliant investigator There are seemingly trustworthy reports of several albinos in whom with years there was an increased pigmentation of the hair, skin, and notably of the irides[3]

The old suggestion of tattooing the cornea has two decided objections 1, the danger from the operation, performed on an otherwise healthy and normal eye In a densely leucomatous eye there is nothing to lose, but were I an albinotic patient I would hesitate to permit the tattooing of my cornea, 2, the transparent sclerotic and lid will also transmit so much light as to prevent absolute perfection of result, even though the imitation tattoo-iris were successful

In this connection, my friend, Dr Wendell Reber of Norristown, Pa , in conversation with me suggested tattooing of the palpebral conjunctiva,—a plan that would certainly aid in shutting out the light that the non-pigmented skin of the lid transmits This might give the darkened lid a peculiar appearance, and render the sensitive patient more uncomfortable than ever, suffering, as he does, enough from his conspicuousness If corneal tattooing were successful this would certainly aid in giving relief

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[2] This causal agency is shown in the quick changes to be noted, according to my friend Dr de Schweinitz, in the amount of astigmatism as observed by the ophthalmometer when the lid is drawn away from the globe or when the patient partially closes and retracts the lids Note also the power of a meibomian cyst to change temporarily the axis of astigmatism (cf Gould, Medical News, June 3, 1893)

[3] Joseph Jones M D, on Fevers, p 1163

A more probably successful plan may be one with which I am now experimenting the wearing of London smoke coquilles that will cover the eyeball, and that permit enough light to pass to enable the patient to catch glimpses of objects with the peripheral portions of the retinæ This is for purposes of safety and comfort to the patient in detecting objects not directly in front In these coquilles I first ordered a round segment, one-sixth of an inch in diameter, exsected, directly in the line of the visual axes, and into the openings I inserted transparent lenses with the patient's ametropic correction My hope was that by this plan the peripheral portions of the retina will be shaded, the image fixed accurately at the macula, and the nystagmus prevented, with the necessarily resultant cure of the amblyopia These spectacles were given Case 5 Within thirty seconds after their application, the girl became deathly pale, was seized with violent nausea, and would probably have swooned if the glasses had not been removed I explain this as perhaps caused by the too sudden cessation of the nystagmus, the violent checking of an habitual, powerful and rapid innervation, with consequent overflow of the innervation to other ganglionic centers and derangement of other related functions The experience was so frightful that the patient could not be induced to repeat it I then had another pair of lenses made similar to the first, but with the transparent lenses correcting the ametropia, five-eighths of an inch in diameter After some trouble at first, these were worn with great comfort and delight Observation of the pupil with these lenses in place shows immensely diminished nystagmus After these with daily interruptions had been worn for a few weeks, the first pair with the one-sixth inch diameter lenses, were applied and worn with great comfort The girl goes to school and dreading the unfeeling words and acts of the scholars she will not wear them at school, but does wear them by choice mornings and evenings at home The difficulties of therapeutically or mechanically meeting and overcoming the defect are therefore seen to be very numerous and great But it is a great pleasure to know that this method does to some extent meet them, and the almost cured nystagmus shows the theory I have advanced as to its origin, is substantially correct I am sure that it would be entirely stopped if the lenses were worn continuously for a long period of time I shall later report the results as to these experiments[4]

I will allude to still another method I have in mind an attempt to stimulate the pigment-secreting function of the cellular elements themselves, and to supply the pigment matter This would probably succeed if at all, only in the young with plastic tissues With this end in view I propose to keep up instillations of a solution of pyoktanin blue in a child's eyes, coupled with delicate massage with the closed lid The tissues, such as the iris and choroid may properly be supposed more responsive to such treatment than those normally non-pigmented If the experiment do no good it can hardly do harm

It goes without saying that the acquired ametropia should be corrected This is a difficult task, but patience and ingenuity will conquer it Case 8 was wearing "prescription glasses," simple sph + 2 50 D , in each eye when he came to me There is a world of significance to this boy in the fact that he is now wearing R + sph 5 00 D , ⊃ + cyl 2 00 D , axis 100° , L + sph 5 50 D ⊃ + cyl 1 75 D , axis 80°

In my cases a sufficient time has hardly elapsed to give any results of the simple correction of ametropia, but in all cases there has been the most gratifying increase of power to read, study and sew, the glasses being prized as the most precious of valuable things There has been an equally pleasant reduction of the photophobia in all of these cases

I wish that physicians to whom the subject is of interest, will kindly send me all the ocular reports in their power of any cases of albinism that may fall under their notice I would like to learn if the following tentative conclusions are supported or disproved by the experience and observations of others

1 Albinos are normally and even exaggeratedly healthy in body and mind

2 There is no discoverable influence of heredity in the cause or transmission of the peculiarity

3 The sole pathological influence of albinism is upon the eye

4 The ocular evils, photophobia, nystagmus, ametropia, (especially high degrees of hyperopic astigmatism), and amblyopia, are directly and indirectly caused by the transparency of the iris

5 The modus operandi of this etiological factor lies, *a*, in the brilliant and diffuse illumination of the fundus of the eye by the non-exclusion of the peripheral rays of light by the faulty diaphragm, producing photophobia, *b*, the lid and muscular pressure upon the globe resulting from the attempt to exclude the light, produce the refractive anomaly, *c*, the effort of the groping eye to localize and definitize the evanescent and indistinct image produces the nystagmus, *d*, and the amblyopia is a necessary consequence of all these combined factors

6 Proper correction of the ametropia lessens eye strain, lessens photophobia, and increases the power of near-range vision

7 True prophylaxis and cure must look to the pigmentization of the iris, or to the construction of an artificial opaque substitute for natural faulty irides

8 The younger the age at which any prophylaxis or treatment is begun, the more promising will be the results

Dr Murrell—I did not hear the first part of this paper, but heard only the latter part I have a case of this kind under observation at home By wearing the properly correcting convex spheres, about two diopters, ground on blue, her eyes are very quiet and she has practically very good vision Her eyes are quiet as long as the glasses remain on, but in taking them off the eyes resume their former nystagmus

Dr Risley—In cases of albinism which have fallen under my notice, there has always been present high grades of refraction error and nystagmus Much relief has usually followed the use of correcting glasses I have not used the tinted glasses, suggested by Dr Murrell, but can readily understand that it must give great additional relief in these albinotic eyes on bright days I was greatly interested at the time in the old lady, an albino, with mature hard cataract in both eyes, to whom Dr Gould has kindly alluded in his paper The lens was successfully extracted in one eye Vision 6-12 was secured with glasses + 1 50 D There was a large posterior staphyloma at the temporal side of the nerve, so that this patient had evidently been myopic before the occurrence of the cataract

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[4] My friend Dr Risley, tells me he had an albinotic patient with double cataract, without nystagmus It would be interesting to know if nystagmus existed prior to the cataracts

Dr Gould—I would like to ask the gentlemen when they have such cases to please send me a report of them

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TUMOR OF THE IRIS

Read in the Section on Ophthalmology, at the Forty fourth Annual Meeting of the American Medical Association

BY J SCHNEIDER, M D
MILWAUKEE, WIS

Tumors of the iris not caused by infection, such as syphilis or tuberculosis are very rare in our clinical experience, and when seen the majority have arrived at that stage of development when the integrity of the eye has been so changed that in order to arrest farther and more serious consequences there remains but one alternative, that of enucleation In the literature on the subject I have not been able to find a similar case, and in my personal experience but this one, where after the removal of such a tumor from the iris there has remained useful vision, and in the light of these facts I consider the following case very unique in its clinical and anatomical results

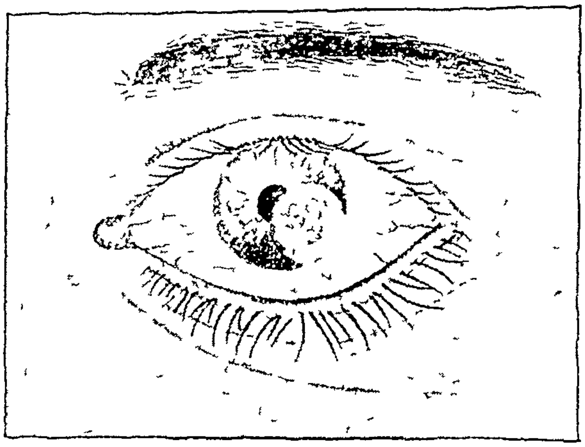
Miss M , of Iron Mountain, Mich , consulted me with reference to a disturbance in the vision of her left eye On awaking the morning of the 29th of March, 1892, she noticed the sight of the eye much reduced and objects seen with it appeared a dark red color On March 30, 1892, the patient came to me, when I found the following conditions R E , normal, L E, ability to distinguish the movement of a hand at ten feet, peripheral perception of light normal, no pain, no inflammatory symptoms The anterior chamber was filled with blood, external layer of the cornea normal, but the lower temporal quadrant of the middle and internal layers were hazy, the haziness extending four or five mm into the cornea, tension somewhat increased

After ten days' treatment the blood in the anterior chamber had disappeared, at which time I was able to make an examination of the deeper structures The vision was 20 30, colors and field of vision normal In the lower temporal quadrant of the anterior chamber was lying a mass partially filling in the space between the iris and cornea, but touching the cornea near the corneo-sclero junction only, thus leaving a shallow anterior chamber above the growth It could plainly be seen that the neoplasm had its origin in the ligamentum pectinatum iridis, and extending nearly to the sphincter-pupillaris, filling almost completely the lower temporal quadrant In consistence it appeared medullary, reddish yellow color, shaped similar to a half coffee bean with the flat side lying directly upon the iris The portion of the growth nearest the corneo scleral junction being pressed upon by the cornea was flattened and grayish white in appearance the remainder appearing very vascular and studded with papillæ With a light reflected directly upon the growth it could plainly be seen that the tumor grew directly out from the iris The longest diameter was 9 mm, the shortest 5 mm The crystalline lens and vitreous were apparently normal, reaction of pupil to light, and appearance of iris as far as the periphery of the tumor were normal The outline of the optic disc in the lower temporal quadrant was blurred, this cloudiness, for the distance of a disc diameter, extending into the retina and finally blending by means of white streaks into the normal tissue of the retina

The patient was 16 years of age, menstruated regularly since her twelfth year, rather anemic, had never had any severe illness, body well nourished, family history tuberculous; but repeated examinations for symptoms of phthisis and syphilis always giving a negative result

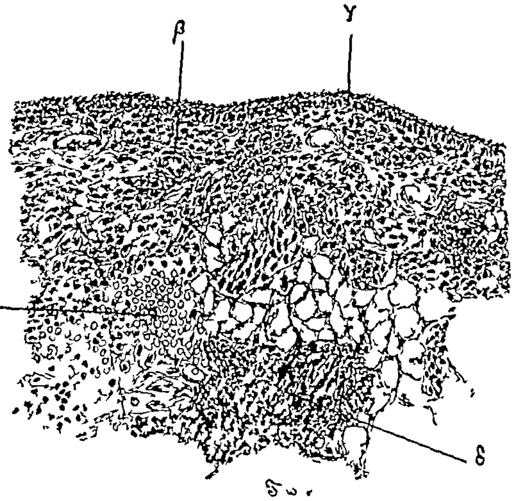
The parents state that at the age of 5 years the girl was injured in the left eye with a fork, five months later they noticed a small brown spot near the pupil This spot did not change till four years ago when with no apparent cause it assumed a flesh color and began to increase in size After several examinations I recommended, especially on account of the family history, that the growth be removed, but it was not agreed to by the parents and for some time the patient passed away from observation

On March 24, 1893, the patient returned, complaining of a dull pain in the eye, tearing, sensitiveness to light with recurrent hemorrhages (the patient could produce a hemorrhage at will by pressure upon the growth) During the period of her absence the neoplasm had grown in all directions, extending upwards so as to cover one-third of the pupil, tension increased, cornea hazy and vision reduced to less than one-half of the normal The optic disc and retina showed marked symptoms of pressure atrophy We have to take into consideration that we have before us a solid, flesh-colored tumor, very vascular and probably not the product of a general dyscrasia The tumor is definitely located, non-pigmented, the surrounding parts, i e, the iris showing no pathological changes



On account of the family history I was inclined to consider it a solitary tubercle or so-called granuloma The negative results of the physical examinations would not be positive proof against a tubercle, for we know from Gradenigo, Perls, Haab, Cohnheim, Knapp and others that tubercular degeneration can be localized in the iris without any constitutional symptoms Pudden, Haab and others affirm that granuloma have for their origin the irritating effects of some microorganism Second, granuloma are poorly organized neoplasms, infectious, inoculable and invade neighboring tissues, especially those with which they are in direct contact The granuloma undergoes, on account of its poor vascularization, cloudy swelling or fatty degeneration Aside from these authorities, the clinical appearance of the neoplasm made me doubt the existence of a tubercle I was inclined to consider it a non-pigmented sarcoma, but the age of the patient and the clinical appearance of the growth were evidences against a sarcoma We can immediately exclude all neoplasms of the iris such as gumma, epidermoidome cyst, cystoid degeneration and melano-sarcoma

On March 28, 1893 the growth was removed in the following manner after the eye was thoroughly cocainized, at a distance of 1½ mm from the corneo-sclero junction I made a linear incision, passing partially through the base of the tumor With an iris forceps I attempted to seize the mass but it being so fragile, only small particles could be removed, with a platinum loop I made similar attempts with the same results, it being very evident that the iris was attached to the capsule of the lens With an iris forceps armed with a double row of teeth I seized the iris on either side of the tumor and with some little effort withdrew the large mass and attached portion of the iris out of the anterior chamber, which mass was then excised as close as possible to the base (There still remained some parts of the growth broken off by the manipulations, in the anterior chamber) After the growth and the attached portion of the iris were excised there followed a severe hemorrhage After the hemorrhage had ceased and the lips of the wound were adjusted, I applied a pressure bandage and put the patient to bed During the healing process the eye showed but very little reaction and on April 23, 1893 the patient was discharged with tension normal and, with the exception of a small zone, the former corneal haziness had disappeared, some pigmented spots upon the capsule in the coloboma, lower temporal quadrant of disc pale, retina changes disappeared and vision 20-30



Description of Platf

A Small hemorrhage in growth just above iris in loose connective tissue showing very plainly the blood corpuscles

B *Blood vessel One of many which are seen scattered throughout and containing blood corpuscles*

C Surface of growth showing covering cells

D Portion of iris from which the tumor probably originated

The tumor measured 7 mm in its longest diameter, 5 mm in its shortest and 3 mm in thickness, its superficial surface was uneven grayish-white, with the base showing normal appearance of iris After its removal the tumor was placed in a sodium-chlorid solution, and shortly afterwards given to Dr Tower of Milwaukee, for microscopical examination, who reports as follows

"I took small particles, every precaution being taken to prevent them from being contaminated and planted them in tubes of agar, blood-serum, gelatin, and in bouillon both acid and alkalin, and kept them at 37 degrees centigrade and also at about 20 degrees centigrade for several days, and was unable to get rowths except in one tube a little penicellium s a contamination from without, either from of the utensils used I examined stained preparations for the tubercle bacilli with negative results, in fact, did not find any germs at all or evidence of them

"I have made examinations directly of small portions when fresh, under the microscope, and found a connective tissue and epithelial growth from apparently the iris Upon section and examination, I find the growth to be a papilloma originating from the sub-epithelial connective tissue of the iris "

We understand by a papilloma, a neoplasm composed of connective tissue with epithelial covering, with very complete vascularization, resembling in construction skin, intestinal and mucous membrane papillæ (Wagner) Papilloma start usually from an injury, producing increased circulation to the part, causing a similar irritation to that produced by dirt in the formation of warts and by decomposing glandular secretions in the formation of condylomæ Such a papilloma may originate in any tissue as they are found in paroophoron, cystic tumors of broad ligament (Mouillin), the skin, tongue, larynx, conjunctiva, fore-skin, glans penis, rectum, synovial membranes If the tumor under consideration was of leprous, tuberculous or actini-mycotic growth, the germs characteristic of these growths would have been found If it had been any of these, or a syphilitic growth or a rhino-sclerotic, the particles remaining in the anterior chamber would have developed into a new growth

I consider the prognosis in this case very favorable, especially on account of the age of the patient if there were particles remaining there would be no probability of the formation of a villous carcinoma, into which the papilloma sometimes develop

THE CLASSIFICATION OF DISEASES OF THE EYE FOR HOSPITAL STATISTICS

Read in the Section on Ophthalmology at the Forty fourth Annual Meeting of the American Medical Association

BY EDWARD JACKSON, A M, M D
PROFESSOR OF DISEASES OF THE EYE IN THE PHILADELPHIA POLYCLINIC, SURGEON TO WILLS EYE HOSPITAL

The custom has become general among hospitals and dispensaries, of publishing Annual Reports, showing the number of cases treated The principal value of such statistics, from the scientific point of view, is that they may throw light on the etiology of certain diseases, by showing their comparative frequency in different places and at different times This can only attach to such statistics when the classification they employ is comparatively uniform, and their value, as well as the ease with which they can be handled in combination, will be enormously increased if the classifications be exactly uniform

On consulting the reports of the principal ophthalmic hospitals of the country, it will be found that in the main they pretty closely agree as to the naming and relative frequency of the mass of conditions mentioned There are, however, points of divergence which render the comparison of statistics obtained in the different large cities difficult and often valueless

To elicit discussion, as well as to urge their importance, certain characteristics of a good classification may be mentioned

First, it must not be so minute as to be seriously burdensome With the future development of ophthalmic science, it will be possible, perhaps, to bring together in our hospital reports many facts that we are now unable to handle with advantage Subdivisions that are now of great practical clinical importance to the individual surgeon, have not been so widely accepted as to make it possible to enforce them in the reports of many ophthalmic hospitals And while, individually, we may greatly desire that statistics with reference to this or that special point might be widely accummulated, the burdening of any common scheme with the subdivisions necessary for that purpose would prevent its general adoption

In the second place, the scheme must have an entirely definite rigid basis, natural so far as possible, but when necessary, arbitrary There has been widely adopted the plan of general classification upon an anatomical basis, thus we have one great class of diseases of the cornea Another class for those of the lens, and another for the optic nerve and retina and so on Then within these general classes, individual conditions are recognized upon a clinical or pathological basis This general method of classification, we may regard as already adopted by common consent The difficulty comes in with reference to the choosing of the special characters on which the division into individual conditions shall be determined

It seems the essential point that must be recognized here, is that there must be no overlapping For instance, take the classification of iritis, cases of this disease may be classified clinically, as serous, plastic, and purulent, but again they might be classified etiologically, as syphilitic, rheumatic, idiopathic, secondary, and traumatic, and such a classification is frequently adopted, but to recognize all these classes as subdivisions of iritis is to introduce confusion and render your statistics worthless

One surgeon will be certain to place the mass of his cases in the column of plastic, although a large portion of these may be of syphilitic origin, and another surgeon will record them as syphilitic, although they may all be plastic in their clinical character In either case, the statistics of one surgeon will be utterly worthless to the other, or utterly worthless for combination with those of the other at the hands of third parties The only way possible to introduce the different sorts of classification, as clinical and etiological, is to make the one subordinate to the other As under the head of plastic iritis, to recognize syphilitic or rheumatic as varieties, and to recognize the same varieties under the heads of serous or purulent But in the general scheme this must be done very sparingly, if at all, on account of the enormous extension of the list that it will entail Individual reporters may indulge in it to any extent, provided they make their main groups conform strictly to the general scheme Regarding the case of traumatic affections, there is less danger that cases of such origin will be placed under some other head, so that some departure from the strict single basis of classification may be possible in regard to them

One of the most difficult questions to deal with in this connection is that of the duplicate representation of cases The question as to whether each case shall appear only under some single head, or whether it shall be represented under the head of every pathological condition present that is given place in the general scheme

If statistics are to be used to determine the relative frequency of certain conditions, then every occurrence of such a condition, whether alone or in conjunction with other diseases, should be reported And probably this would be on the whole the best method of working If we could only be sure that it was always carried out very little could be said against it With some conditions as, for instance, persistent hyaloid artery or coloboma of the iris, there is little likelihood of omission But in the cases of ametropia and heterophoria, conditions that are present in some degree in almost every case, it is not at all likely that they will always be recorded, with these and to a less extent with many other conditions, the relative proportion will necessarily vary with the predilection of the observer Still this would be largely true, with the plan of giving to each case but a single diagnosis so that, on the whole, it seems best to give up any attempt at making the number of cases balance the number of diagnoses, or the number of patients balance the number of pathological conditions present

With regard to nomenclature, the writer would favor the adoption of strictly English names throughout, merely adopting foreign terms or anglicizing where this is necessary In most of the hospital reports the mass of terms are already English, very few attempt to give them all in Latin

Where two or three different terms are in common use to designate the same condition, it will in some instances be necessary to include more than one, but this should be placed, not as distinct conditions, but as a synonym on the same line, so as not to allow one observer to report his cases under one title and another to report the same class of cases under another title

Whatever system of classification is adopted, it will in the end be most successful if it be one that is capable of future development, without radical rearrangement or dislocation of its parts For this reason, perhaps more than for any other, it should at first be simple, and attempt very little refinement, the main point now being to arrange principal groups, so that they will not need future alterations Subdivision within these groups can be carried on by future conferences, or even may be allowed development at the hands of individual surgeons, since for purposes of comparison these subdivisions may at any time be thrown together, if only there is strict agreement as to the main grouping

ULCERS OF THE CORNEA

Read before the Colorado State Medical Society, June 20 1893

BY WILLIAM C BANE, M D
DENVER, COLO
Late Lecturer on Diseases of the Eye and Ear in the Medical Department of the Western University of Pennsylvania, Ophthalmologist to the Chair of Neurology, and Chief Clinical Assistant in Ophthalmology and Otology in the Medical Department of the University of Colorado Ophthalmologist and Otologist to St Anthony s Hospital and the House of the Good Shepherd

The importance of this affection, I believe, justifies a brief review of the subject

Corneal affections constitute over one-fifth of the eye cases that come under our care[1]

Of the three principal types of inflammation of the cornea, ulceration is the most common The numerous varieties of corneal ulcers have been conveniently grouped as superficial and deep

The superficial class includes those limited to the epithelial layer and are most frequent in young subjects This is especially true of the phlyctenular ulcer, which occurs in the delicate and strumous

Not infrequently is the superficial ulcer the result of traumatism, the accident occurring in persons whose blood state is poor, or the wound becoming infected, an ulcer forms The symptoms of superficial ulcers vary from slight irritation to marked photophobia, lachrymation and pain in and around the eye The pain is frequently paroxysmal in character The ulcers differ in appearance, location, course and importance The phlyctenular ulcer is usually small, circular and of a yellowish gray color When located at or near the corneal margin, which fortunately is its most common seat there may be one or more of them Their course is short, as a rule, and little or no opacity remains However, the phlyctenular ulcer does not always run so mild a course The subjects being delicate, if the treatment is not proper, the ulcer may enter Bowman's membrane and finally result in perforation of the cornea, or being central in location, produce such an opacity as to permanently impair the vision Fig 1 illustrates this type of ulcer

The so called dentritic ulcer, is an exceedingly interesting one It is limited to the superficial layer of the cornea, and is indicative of a blood state due to or like that of malarial poisoning The arborescent or dentritic shape of the ulcer is readily recognized by those who are familiar with this form of keratitis Some excellent papers on malarial keratitis, and keratitis dentritica, have been published within the past thirteen years The first clear description of this disease was by Dr Kipp[2] of Newark, N J, in 1880 The following year Dr Noyes[3] of New York, and Dr Hotz[4] of Chicago, published papers on keratitis due to malarial infection

In 1889, at a meeting of the American Ophthalmological Society, Dr Kipp[5], read another paper, in which he gave an admirable description of the disease, and stated that of the 120 cases he had treated since his first paper was published, in 90 per cent of them there was a clear history of malarial infection His conclusions were confirmed in the discussion by Drs Noyes of New York, Green of St Louis, Sutphen of Newark, Theobald of Baltimore and Miller of Providence

Dr Kipp, who has made a careful study of this form of keratitis, has observed that "following a paroxysm of intermittent fever, a series of small, grayish, opaque elevated dots, like minute phlyctenulæ appear on some part of the cornea, usually not far from its margin, arranged in a line like a string of beads On the following day, the elevations have disappeared, and in their place is to be seen a narrow furrow with a hazy floor and grayish ragged edges At the same time, or perhaps not until some days later, one or several short grayish branches develop on one or both sides of the original furrow Unless arrested in this stage by treatment, the main furrow and its branches continue to grow in length without, however, increasing in depth or width" "The furrow always remains quite shallow and probably seldom penetrates Bowman's layer" The symptoms are similar to those of phlyctenular keratitis, excepting that there is less congestion of the ball, the pain is more severe especially in the supra-orbital regions There is also more or less anesthesia of the diseased surface of the cornea, as first pointed out by Dr Noyes[6] of New York

Fig 2, after a drawing by Dr Kipp, illustrates the ulcer of malarial keratitis In June of 1892, Haltenhoff[7] published an interesting resume on keratitis dentritica or herpes From Haltenhoff's paper we learn that Haab and Hagnauer of Zurich, take the ground that the malarial keratitis of Kipp and his followers, and keratitis dentritica of Hansen Grut, Emmert and others, is nothing more than the ulcerative stage of febrile herpes of the cornea, as described by Homer of Zurich, in 1871 Haltenhoff expresses the opinion that it is likely that the two diseases, keratitis dentritica and herpes cornea, are separate and distinct

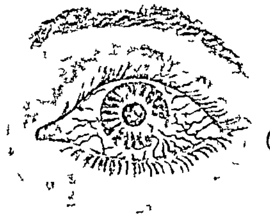


Fig 1 Phlyctenular Ulcer

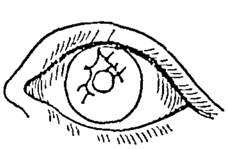


Fig 2
Malarial Keratitis
(After Kipp)

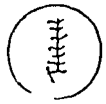


Fig 3
Keratitis Dentritica
(After Dunn)

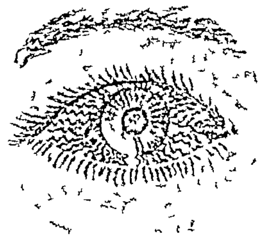


Fig 4 Superficial Ulcer

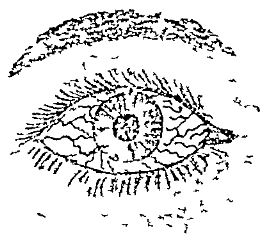


Fig 5 Superficial Ulcer Healing

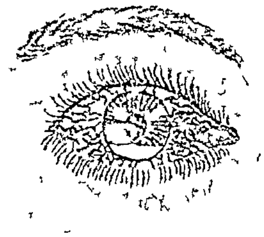


Fig 6 Ulcus Serpens Hypopyon

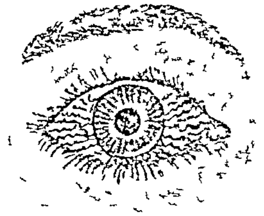


Fig 7 Crescentic Ulcer

Dr Dunn[8] of Richmond, Va, has reported a case of keratitis dentritica, associated with herpes zoster, in the *Annals of Ophthalmology and Otology* for April of this year, with a drawing, of which Fig 3 is a copy In the same number of the *Annals*[9] is a report of two cases of the so-called keratitis dentritica by Dr Morton of Minneapolis, whose cases were evidently of a mycotic type, as they yielded to local antiseptic treatment Studied from an unbiased standpoint I am led to conclude that, while the above types of superficial ulcers have many symptoms in common, they are separate diseases, excited by different causes and require different treatment The mycotic yield promptly to local antiseptic treatment The herpetic require constitutional, in addition to local treatment The malarial type will not improve without anti-malarial treatment, as well as local applications

The following report of a case under this heading is of interest, on account of the malarial history, though twenty years have elapsed since the disease was contracted

F G W, male, aged 46, born in Germany Family history unimportant Admits moderate use of alcohol, but denies having had venereal disease He had an attack of influenza one month ago, and has had several attacks of acute inflammatory rheumatism during the past three years He is subject to facial neuralgia About twenty years ago he had a severe attack of malarial fever *Status presens* V R, 6-21, L 6 6 R E There is some edema of the lids, the ocular and palpebral conjunctivæ are very much congested, eyeball is tender to the touch, cornea is slightly hazy, there is a superficial ulcer in the lower outer quadrant of the cornea, extending 8 mm along the margin and 3 mm inward, as shown in Fig 4 Having a history of inflammatory rheumatism, neuralgia and a recent attack of influenza, I ordered sodium salicylate and acetanilid in 10 grain doses every four hours Locally, cocain, homatropin and aristol were applied On the following morning the patient reported, free from pain, and of having had his first good night's rest for a month Less congestion and tenderness of the eye, 4 per cent solution of cocain instilled, and aristol applied to the ulcer

December 1 Patient had four attacks of pain in the eye, and right side of the head since midnight The eye, however, looks better Aristol applied to the ulcer Applied cantharidal collodion to the right temple Ordered one eighth grain of sulph morphin, and 1 minim of fluid ext aconite to be taken every two hours if needed to relieve the pain

December 2 Pain returned at 5 P M, and continued until 3 A M Cornea is clearer

December 7 The eye has been dressed daily with cocain and aristol Hot water dressings for half an hour every alternate hour Internally, one-twentieth of a grain of the bichlorid of mercury six times daily, instead of the salicylate An attack of pain yesterday was only partially relieved by four one-fourth grain tablets of sulph morphin taken within six hours Hot fomentations gave temporary relief The cornea is clearer, yet the ulcer is somewhat deeper Being reminded of the effects of malaria, I ordered 3 grains of sulphate of quinin, to be taken every four hours, the evening dose to be 6 grains

December 10 Patient has been free from pain since commencing the quinin, there is less congestion of the eyeball Tension is normal V R 6 12 The epithelial layer of the cornea is reforming and the ulcer is smaller Under cocain, the ulcer was touched with pure carbolic acid on cotton, the cotton was deprived of an excess of acid by compressing it between layers of dry cotton

December 19 There has been no pain, excepting a slight attack on the afternoon of the 16th There is now but slight ocular congestion No tenderness of the eyeball The ulcer has healed, leaving but a slight opacity V R 6 6 Fig 5 illustrates the ulcer as it appeared December 12

On Feb 21, 1893, patient called to see me while on a visit to the city, his home being in Saratoga, Wyo An examination failed to reveal any evidence of the eye having been diseased Vision, 6 6

We are all, unfortunately, too familiar with the deep ulcer and its destructive work It frequently is the result of an infected corneal wound, one of the most destructive of which is a wound infected from an old dacryocystitis The deep ulcer, as already alluded to, is sometimes the sequel of neglected or improper treatment of a phlyctenular ulcer It, at times, develops during an attack of purulent conjunctivitis and severe forms of exanthemata An ulcer developing in the course of purulent ophthalmia is a grave complication And when a gray infiltration makes its appearance in the center of the cornea, during the active stage of the ophthalmia, it is quite certain to melt away

The serpiginous ulcer, which commonly develops in the old and feeble, is sometimes very destructive Beginning at the corneal margin, as perhaps a slight gray spot, it spreads toward the center, increasing in depth, the inner border being sharply defined while the outer is filling up Unless the ulcerative process is checked it soon perforates the cornea, and becomes complicated with inflammation of the deeper structures Hypopyon or pus in the anterior chamber is likely to appear before the perforation takes place Fig 6 illustrates this type of ulcer with hypopyon

The crescentic ulcer, forming a deep furrow around the margin of the cornea, is occasionally met with in the debilitated If neglected, it will extend around the cornea and cut off its nutrition Being of a mycotic type, the progress can be checked by antiseptic applications

Fig 7 illustrates a case of this type, in which one application of carbolic acid, followed by daily instillations of warm solution of chlorate of potassium effected a cure in about ten days In the treatment of corneal ulcers we aim at helping nature by relieving the pain and checking the destructive process In some, the exciting cause is local, while in others it is constitutional Others, being deep and very destructive, are at times almost painless The first indication is to place the eye at rest In young subjects the accommodation should be paralyzed with atropin and, in all cases, excepting perhaps the superficial phlyctenular ulcer, a protecting compress should be worn to aid in keeping the eye quiet, and prevent friction of the lids The compress may be held in place by a bandage, adhesive strips, or with a pair of coquilles

The application of hot water for ten or twenty minutes, every one or two hours, aids very materially in relieving the pain and congestion The hot water can be applied to the closed lids and brow, or applied direct to the ulcer with the aid of a dropper When using the latter method, I order 5 grains of chlorate of potassium to the ounce of water Dr Lippincott of Pittsburg, has reported excellent results from dropping water at the temperature of 150 degrees directly to the affected area[10]

In persons beyond twenty-five years of age, atropin should be used in weak solution, at the same time eserin may be used with advantage, in one-fourth to one-half grain solution The eserin contracts the vessels, relieves the congestion, tension and pain

Locally, to the ulcer, we have a choice of several well-tried and faithful remedies They are, boric acid, aristol, ointment of the yellow oxid of mercury, 10 grain solution of nitrate of silver,[11] liquid carbolic acid,[12] scraping, actual[14] and the galvano-cautery After clearing the ulcer of the detritus under cocain, the application of dry boric acid, aristol, the yellow ointment, 10 grain solution of nitrate of silver, or the liquid carbolic acid, will do excellent service in the superficial and moderately deep ulcer In the deep and rapid ulcers, the actual cautery or galvano cautery are the most reliable for destroying the unhealthy tissue and stimulating healing When dacryocystitis exists, which according to Noyes[15] is the cause of infection in from 20 to 32 per cent of the cases of ulcus serpens, it is essential that the sac be freely irrigated with an antiseptic solution, such as the bichlorid of mercury, 1-5000, once or twice daily, or at each dressing of the ulcer In cases where perforation is threatened and pus has been deposited in the anterior chamber, paracentesis should be performed to relieve the tension and evacuate the pus

Constitutional treatment is indicated in nearly all cases of corneal ulceration The feeble and strumous should receive plain nourishing food with tonics and cod liver oil Where there is a malarial history, quinin or arsenic should be administered

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Steele Block, Sixteenth and Stout Streets

ON THE PROPHYLAXIS OF CONTAGIOUS DISEASES IN A LARGE CITY

Read in the Section on State Medicine at the Forty fourth Annual Meeting of the American Medical Association

BY SAMUEL P DUFFIELD, M D
DETROIT, MICH

The above subject may seem to some who have not had charge of the department of contagious diseases of a large city, a very simple question It will be found the most difficult problem that comes to the health officer for solution

An experience of six years as Health Officer of Detroit has most effectually changed many of my views on this subject, and what I now lay before you is the result of practical every day efforts to reach the point of holding these diseases in check to the greatest degree possible I am satisfied I have found a method, but as my Board has not indorsed it, it must slumber until some one proves that my views belong to the practical every day realm and not to theory I place before you a tabulated record of the contagious diseases, scarlatina and diphtheria, and will refer to it as I go along

NUMBER OF DIPHTHERIA AND SCARLET FEVER CASES REPORTED TO THIS OFFICE DURING THE YEARS 1891, 1892 AND 1893

SCARLET FEVER

	1891	1892	1893		1891	1892	1893
January	44	167	90	July	42	101	
February	35	156	72	August	49	61	
March	45	208	79	September	57	52	
April	57	176	50	October	113	52	
May	51	183	48	November	157	41	
June	37	136		December	151	88	

DIPHTHERIA

	1891	1892	1893		1891	1892	1893
January	122	115	91	July	53	100	
February	93	81	53	August	88	63	
March	107	102	67	September	81	62	
April	75	190	38	October	121	121	
May	97	125	65	November	79	89	
June	63	108		December	146	100	

In looking this matter over, you will notice that beginning in 1891, with a low rate in January, 1891, it so continued up to July, when it began to rise, and in October we had an increase of sixty-nine over January

I appealed to the Council for the power to quarantine, it was assumed the Board had power to quarantine, but when you quarantine you must feed and take care of those quarantined As there had been no appropriation made for that purpose, I asked my Board to recommend that an appropriation of $15,000 be given the Board of Health to establish a contagious disease hospital This was laid upon the table and the Health Officer was invited to speak before the Council, giving his views on the subject In the meantime, real estate had improved about my small pox hospital, which was originally outside the city limits, but in the effort to boom real estate in the city it was brought within the city limits, and being an eyesore to the real estate men "who had the interest of the city at heart" (?)—you, gentlemen, will appreciate this latter remark—my hospital was one night cremated and I left without a place for smallpox patients Under these circumstances I saw I must quarantine at once, or have the city overrun with an epidemic, and so stated to the Council They did not grant the request of the Board of Health, but said that should I, as Health Officer, go ahead they would allow all bills, etc Accepting them at their word, I established quarantine, and have followed it as closely as I could with only one detective, and you see in the table that there has been a notable diminution in the number of cases in 1893 of both diphtheria and scarlet fever (let the reader contrast the years 1891, 1892 and 1891) You will especially notice, from the time I began the system of quarantine, which was in June, 1892, the cases began to diminish, and you will also notice that from that time forward we were under the figures for 189[illegible] and very much lower than the figures of 1892

Gains in scarlet fever,	601	in five months
Gains in diphtheria,	299	in five months
Total gains, -	900	

While this is a decided improvement, it is not what could be brought about by other means

The system of quarantine in a great city is deficient Unless you have a large police force you can not have absolute isolation of the patient, and in my report for 1891 I recommended that we should have a series of cottage hospitals, virtually a series of cottages which could be arranged in the form of a cross, or otherwise, but in such a way as to be able to separate the play grounds and promenades completely from each other, so that a convalescent scarlatina patient will not come in contact with one recovering from diphtheria

Since we had to contend with contagious diseases I have been, by observations and facts received from police and detectives, satisfied that these diseases were spread by personal contact of ignorant mothers and fathers of the children The cottage in which they live is open to the neighbors and others who are not afraid of the placard, "don't believe it is scarlet fever anyway, because the child is playing around the house"

The man goes to work and carries the disease with him If a skilled mechanic we have had to quarantine him, allowing him only groceries and provisions, and he loses money every day Now should the isolation cottage system be adopted, we would solve completely this most difficult problem, for the mother could go with the child to the cottage and the home would not become infected with any prolonged sickness in it Should another child be taken sick it can be transferred to the mother's care at once

During that time I was being severely criticised for suggesting the cottage hospital system, etc, some one wrote that there should be a general place where workingmen with their well children should go and be taken care of at the expense of the city, leaving the sick child and mother to inhabit the home The city would have a heavy bill to pay, should it adopt the system, and we would find we had grasped the short arm of the lever and would be unable to do anything

The value of any machine is the force it can develop economically for practical use So the value of any sanitary effort is in proportion as it does good practically, performing practical every-day work

All the fine spun theories of preventive medicine have not yet solved the problem of perfect isolation of contagious diseases in a great city The fact that these diseases exist more or less in a city proves this point One of the most dangerous periods to the general public is the period of convalescence in scarlet fever patients They are not considered sick and are more apt to come in contact with other persons If the cottage hospital system was adopted, the diphtheria patients could be keep by themselves, and the scarlet fever also treated the same way

On large hospital grounds they could enjoy themselves in the open air, etc, and yet no danger of communicating the disease would exist Such a thing would by this time have been inaugurated and in full play, had not the people of Grosse Pointe placed a barrier in the way which, for the present at least, blocks all progress in the matter

The city has a lease for ninety-nine years of the Crawford Street property, and as that property is in the city limits there is no danger of being disturbed in the possession of it Being in the city limits no action, except that of the council itself, can drive it out (See Howell's statutes) While, should we go to Grosse Pointe, we would be liable to be driven away any time the supervisors of the town might see fit

It is the duty of all large cities to establish these places to protect themselves from terrible epidemics, and so thoroughly has this been tested by real estate men and others attacking the right to establish hospitals in great cities, that the highest constitutional laws in the land give every city this as their unquestionable right New York expends every year $50,000 for the support of Riverside Hospital, and finds this her only way of escape

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HEAT A PREVENTIVE OF CHOLERA

Read in the Section on State Medicine, at the Forty fourth Annual Meeting of the American Medical Association

BY CHAS H SHEPARD, M D

BROOKLYN N Y

While we hope by reason of good sanitation to escape the scourge of cholera this year, yet the bare possibility of its coming renders all matters of hygiene of supreme importance Therefore, whatever may contribute to our welfare in that direction is at this particular time worthy of more than ordinary consideration In order to thoroughly master any disease it is necessary to know somewhat of its characteristics The home of cholera is in India, and it is there only by virtue of removable causes The personal habits of the natives are cleanly, but they have no public water supply, and in the larger cities the only water they can obtain becomes polluted from their own excretions It has been demonstrated that where pure water was furnished the inhabitants, as in Madras and Calcutta, the ravages of cholera were greatly reduced, and the same has been observed in other countries Dr Pauline Root, who lived eight years in Southern India, reports that there is always more or less cholera prevalent in that section, and that it is more common after certain religious festivals Drainage, with the exception of the open sewer, is unknown, and the total lack of sanitation is responsible for the consequent spread of the disease

The study of the history of various epidemics has made many things plain, but the first radical step towards the understanding of cholera was taken when Robert Koch, the leader of the scientific expedition in Egypt, in 1883, discovered the existing cause of that disease in the comma-like bacillus Shortly afterward, Reitsch and Nicati, by introduction into the duodenum of cultivated comma bacilli, produced the veritable Asiatic cholera in guinea pigs, and the same effect has been confirmed by other investigators It has also been demonstrated that the cholera germ is not an animal growth which can be suffocated by fumigating gases, but a vegetable, like the yeast plant, which needs a moderate amount of heat for its development, but apply more heat to the yeast plant or cholera germ, say 140 degrees Fah , and the germ is dead

The introduction of this specific form of microorganism is found to be necessary for the production of the disease These germs must reach the intestinal canal alive, otherwise the disease can not be developed They necessarily pass through the stomach, but an acid medium is death to their existence In fact they are the most easily destroyed of all the pathogenic microorganisms known If they safely run the gauntlet of the stomach, they come in contact with an alkalin medium and an albuminoid pabulum in which they develop and multiply with startling rapidity

These germs always come from the dejections of a cholera patient, and are commonly re-introduced into the alimentary canal of a second person, either in drinking water or in food It is asserted that they do not enter the blood or tissues of the body, but remain in the lumen of the intestinal canal until they have exhausted their period of existence or killed the patient They require for their rapid growth and development a large amount of water, an albuminous pabulum, a moderate degree of heat, an alkalin medium and a quick removal of their products The water is obtained by a rapid outpouring of this fluid from the blood This large outpouring, together with the irritation by the growing bacteria, naturally increases the peristalsis and starts a diarrhea which at first is painless, but later becomes a pronounced symptom The continual flow of water into the intestinal canal dehydrates the blood, and prevents the absorption of nutrition, thus at once parching and starving the victim This readily explains the other symptoms and lesions It is also plausibly asserted that the accelerated heart beat is due to the small volume of blood which flows with difficulty through the capillaries The pulse is small and thready, because there is not enough blood to fill the arteries The dyspnea is marked because the blood carries but little oxygen The brain is sluggish and irregular in action from an incomplete blood supply The muscular contractions are painful on account of the intense dryness, and a consequent binding of the fibers as they play one upon another, and the liver and kidneys degenerate from the same cause The surface epithelium in the intestines degenerates, dies and desquamates, producing the characteristic rice-water discharges These symptoms and pathological conditions are identical with a severe attack of simple cholera morbus Both the simple and Asiatic types of cholera can result fatally through the abstraction of water from the system

The discovery of the bacteriologist, that the cholera germ will not live longer than twenty-four hours entirely without moisture, and that excessive heat or excessive cold will kill it, relieves us from all fear of taking the disease by breathing the germs in the air Furthermore, the cholera germs do not produce spores or seeds Reproduction is effected by rapidly progressing physical extension

It has been found impossible to cure cholera when at its worst, for under whatever treatment tried, nearly one-half of those attacked die It is about as hopeless to expect to find a drug or nostrum which can go through the process known as "curing cholera," as to find a drug which can cure a man who has taken a dose of arsenic Cholera once thoroughly established, drugs are of little avail So said a prominent physician of England, and this statement but emphasizes the importance of all preventive measures

In the present state of medical knowledge and sanitary science, cholera can be reduced to one of the least dangerous of maladies, instead of being one of the most dreaded In theory, it is possible to eradicate Asiatic cholera from the face of the earth, by thorough disinfection

The most important matter is the establishment of a system of civic sanitation which shall have for its object the prevention of an outbreak of cholera Cleanliness is the one great safeguard against this enemy of mankind Its victims are chiefly those who are already in an unhealthy condition or in unwholesome surroundings If we put the surroundings in good order, but more than all, if we put ourselves in a thoroughly sanitary condition, we can defy the foreign plague

A healthy stomach has the best guard against the cholera bacillus in the acid condition of the gastric juice The more effectually to secure this action, large quantities of fluids, even water should not be taken with the food By swallowing a large amount of liquid at once, part of the contents of the stomach will immediately pass the pylorus, and thus, even provided there were germs in the stomach that would have been destroyed if allowed to remain in contact with the acid of the gastric juice, they may be passed on to begin the work of destruction

All agree that it is of the greatest importance to treat the first symptoms of looseness of the bowels, and in this treatment the usefulness of acid astringent drinks is most valuable The bacteriologist finds that the healthy normal gastric juice of an animal's stomach will quickly destroy the cholera germ, even when literally fed on the same Therefore he says "Let each individual quarantine his own system, by keeping it clean and healthy at all times Avoid stimulants, narcotics, dietary excesses and dissipation Don't overwork"

Quarantine has been aptly described as an elaborate system of leakiness If complete, it would be impossible for a commercial country, and if incomplete, it gives only a false security, as all foreign and continental experience thoroughly proves The custom comes down to us from ancient times, and had its origin in the fears of the superstitious These barbarous regulations are still observed in many European countries, and our experience in New York harbor last autumn was more worthy of the Middle Ages than of the nineteenth century The futility of such measures is shown by the complete system of isolation enjoined by the Chinese, and yet in no country are destructive epidemics more common On the contrary the British have almost no quarantine, and at the same time are more exposed by their intimate commercial relations with the rest of the world than any other nation, yet last summer, while we were wildly excited over the matter, the English were more concerned about cleanliness than quarantine The commercial interests of that country have given wisdom to their manner of dealing with infectious diseases of foreign origin, and the result has been the reduction of quarantine to its simplest form, with special attention to the sanitary condition of seaports, cities and towns

England has expended, within the last fifteen years, about $450,000,000 in local hygienic improvements, exclusive of a large amount of money spent by the Government to supplement the efforts of the local boards The fact that last year that country was practically free from the disease, and that there was scarcely any interruption of travel or traffic, serves to show that sanitary measures are of more value than all else beside

The cholera germ is not the most important factor, but is rather the incidental cause The question of prime importance is the sanitary condition of the individual The introduction of a person infected with cholera into a filthy town is like bringing a match into a powder magazine, but there would be no explosion unless the powder was there ready to explode

Therefore, the most effective means to prepare our people against an epidemic of cholera is an enforcement of all sanitary measures, chief among which is the establishment of large public Turkish baths, which I had the honor of advocating before this body in a paper read last year In no other way could public funds be applied where so much positive benefit to the whole community would be derived, nor could wealth in any way so completely honor itself as by entering upon large enterprises of this kind By so doing we would establish a higher standard of health in the community, and not only would the poorer classes be less liable to an invasion of the cholera, but of all other filth diseases as well, such as diphtheria, etc One of the most effective quarantine measures would be a large Turkish bath, where every immigrant could be thoroughly cleansed, completely disinfected, and his clothing and personal effects sterilized

Let the people understand that the cholera is non-contagious The atmosphere is not permeated by germs that endanger health, in fact the air may be thrown out of consideration almost entirely The source of danger is the food and water that have been contaminated by want of attention to the gastric and alvine discharges of the sick, or to the careless handling of the bedding and linen that have been soiled by them It is not so much the dirt of the street or the emanation of the sewers as the filthy people themselves that generate disease The most injurious thing that can be done with cholera excreta is to dump it into the sewage to pollute the rivers of any town As it is at present, a large river in a city is an active element in the distribution and propagation of contagion, and the surest prevention of cholera is to burn or otherwise consume all sewage, instead of dumping it into the waterways Strict attention to cleanliness is of the greatest importance in such cases, and renders cholera no more dangerous than a case of typhoid fever

In London, during the year 1866, it was found that one family that had escaped from Egypt to dwell on the banks of the river Lee, from which the supply for East London was drawn, so contaminated the water as to produce an epidemic which carried off 6,000 people The trouble in Hamburg last year, arose from the pollution of the river Elbe from which the water supply of that famous city was drawn Seven thousand victims in one month was a fearful retribution for the sin of neglect The *Indian Medical Gazette* of May, 1887, reports an outbreak of cholera on board a ship at Calcutta, from milk supplied by a native This milk was proved to have contained 25 per cent of water from tanks contaminated with choleraic matter No more cases occurred when the supply of milk was stopped

Thus it is apparent that the most perfect personal defense against bacteria of all kinds, but particularly of cholera, is a vigorous digestion in a well-conditioned body, and the one fluid that is absolutely fatal to the bacillus of cholera, is healthy gastric juice Furthermore, it would seem from a series of experiments on themselves, conducted by Prof Pettenkoffer and Prof Emmerich of Germany, wherein each swallowed 1 centimeter of fresh culture of comma-bacillus, direct from Hamburg, that measures directed against the germ itself, such as quarantine, disinfection, etc , were less important than attention to hygienic conditions, diet and personal surroundings

This most desirable consummation is to be attained by the action of heat, through a process that commends itself to every thinking mind, and is at the same time both pleasurable and invigorating The highest medical authorities in this and other lands have given their fullest indorsement of its use and advantages It has stood the test in several previous epidemics with eminent success The great need of our country is large public establishments, where the people can resort at all times, and by a complete course of sanitation ward off all danger of an epidemic

It is as a preventive that the great value of heat will be demonstrated, and the treatment that strives simply to augment in every way the vital resistance of the system to the successive invasion of choleraic poisoning is what we would most seriously urge Hot baths, combined with absolute rest of the body should be availed of at the earliest moment

That heat has manifold uses and confers countless benefits, all will admit Its effects are apparent throughout the world, but none are of greater service than those directly applicable to the human body Heat comes directly as well as indirectly from sunlight, which is itself but an electric force There was a time when mankind worshiped the sun Through heat we live, move, and have our being without heat we die While it is so powerful an agent in health, it can not be thought strange that it is equally powerful in disease, whether as a preventive or cure Heat purifies the air that we breathe, the water that we drink, the food that we eat, and thus becomes the best and most important disinfectant Through the medium of the Turkish bath, which is found to be the most perfect form of administering heat to the human body, a record has been made that is astonishing to all who are not familiar with its practical working The experimental stage has long passed

Our food and drink are rendered both more palatable and germ proof by the action of heat We can rely perfectly on heat as a means of sterilization The germ can not live in food that has been thoroughly cooked, nor will it survive in water, milk, tea or coffee, that has been on the fire long enough to boil Heat is also death to the cholera germ, if applied in air, steam or water

Surgeon General Sternberg says that free exposure to air and sunshine is one of the most reliable methods of disinfecting articles which have attached to them the cholera spirillum Its low death point which he places at 125 6 degrees Fah , justifies us in giving heat the first place as an agent for the destruction of pathogenic microorganisms Ten minutes exposure to 140 degrees may be relied on for its destruction Milk or water heated to that point is rendered safe The germs are also very quickly destroyed by dessication A weak solution of sulphuric, hydrochloric, or carbolic acid will also quickly destroy the germ

Dr J T Talbot of Boston, says "There is no disinfectant or antiseptic equal to heat in a high degree, and in all those poisonous conditions depending on germ life the germs have ten times the resisting power of drugs, although they will in every case be destroyed by a sufficient degree of heat "

Medical Director Bogart reports that when on government vessels in Chinese and Japanese seas, in 1878 and 1885, the cholera broke out among the crew, but was promptly checked by cleanliness and heat All clothing, bedding and personal effects were subjected to dry heat, and the ships were steamed by their own boilers

Dr Louisa R Smith who was in Turkey during the epidemic last year, states as her observation that the majority of cholera cases can be saved, if proper means are used at the beginning, and that the infection is powerless among people who *are careful to* cook all water and food She worked freely among the sufferers, but took only boiled water and hot food

A Russian physician reports excellent results, in cases of pronounced cholera, from placing the patient in a bath of warm water, (99° Fah) As a result the vomiting ceases immediately and does not reappear as long as the patient remains in the bath, which ought to be *at least half* an hour

According to Dr Mariano Semmola of Italy, the sheet anchor of physiologic treatment is by means of complete fasting from the very moment the smallest manifestations of diarrhea appear, to be continued at least twenty four hours *after favorable* reaction has set in First in order of treatment comes hot baths, given at 100 to 104 degrees Fah , and repeated as occasion requires He states that the favorable moment for the hot baths is the *first stage* of the disease, before the algid period has begun, or when the patient commences to feel a sensation of uneasiness in the epigastrium, with or without vomiting He further says that he has seen hundreds of cases where the simple diarrhea, which had been obstinate and persistent for several days, and which would later on no doubt have developed into a regular attack of cholera, suddenly disappeared after one or two hot baths followed by abundant perspiration The return to alimentation ought to be made with the greatest prudence, as the smallest error may be fatal Milk, in small doses, is the preferable form of food when it becomes necessary to recommence alimentation

The bath was a religious and civil law of the Hebrews During the epidemic last year in Russia, an investigation was made to ascertain the mortality among the Jews, and it was found to be only forty victims out of a total mortality of nearly a quarter of a million This fact is a most emphatic comment on the Mosaic laws of cleanliness given that people over two thousand years ago

A man in England once treated cholera patients by wrapping them up in blankets and placing them before a hot fire, and he claimed to cure every case he undertook Mr Urquhart, during an epidemic in Turkey, subjected every member of his household to hot air treatment daily, with the result of complete immunity, while deaths were constantly occurring in his immediate vicinity During the prevalence of cholera in Cork, Ireland, some years ago, the men employed in cleaning out the brewers vats wherein was heat sufficient to cause profuse sweating, were free from the disease, and the other workmen in the establishment petitioned to be put at that work

What more fitting than the use of heat for the cremation instead of the burying of the cholera corpse It has the sanction of the highest authorities, and all sanitarians recommend it, This is complete sterilization of the dead body Virchow's advice as to the best factor in the prevention of an epidemic and in the destruction of any contagious carrier, is "*Heat or Cremation!*" This has been successful wherever tried

Over thirty years' experience in the use of heat as a remedial agent, has demonstrated that all diseases of a diarrheal nature are quickly controlled by its proper use, and during the summer of 1865, when cholera was with us to a limited extent, many cases of painless diarrhea were at once corrected by the action of the Turkish bath

Thus fortified both by theory and experience, we can but conclude that by no other means can one so thoroughly protect himself against the cholera, as well as against all other diseases, as by the frequent use of a hot air bath, otherwise called the Turkish bath

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DIPHTHERIA ITS SPECIFIC DIAGNOSIS

A Paper read before the Mississippi Valley Medical Association, at Indianapolis, Ind, Oct 4, 1893

BY J C CULBERTSON, M D

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE, CINCINNATI COLLEGE OF MEDICINE AND SURGERY

A disease which our National census tells us has a rating as third in the mortality tables of our country is always worthy of profound consideration

Diphtheria is a disease of peculiar interest, because of its singularity in being more treacherous and insidious in its manifestations than any other disease that is met with by the practitioner of medicine, simulating somewhat the Irishman s flea, or the thimble rigger's paraphernalia, in which you seemingly see it, and then you don't see it ! It is no unusual thing for the most acute diagnosticians to err by mistaking a case of diphtheria for a simple follicular tonsillitis, or a follicular tonsillitis for diphtheria, while papers and discussions without number on the diagnostic differentiation between diphtheria and non-infectious membranous croup have occupied very many hours of precious time at our medical society meetings

This continuous uncertainty of diagnosis has caused some excellent practitioners to adopt a pernicious habit of diagnosticating and treating all cases of sore throat, whether simple or malignant, as if they were true diphtheria This might seem to be a safe practice, which is not only bad, but reflects very discreditably upon the diagnostic attainments of the physician who pursues this unwarrantable course Such a method of procedure may seem justifiable as being a safe one to pursue, in that it is sure to afford favorable treatment, even if the case is only tonsillitis True, a treatment designed for diphtheria may cure a tonsillitis, but inestimable harm may have been done in causing an unnecessary alarm on the part of the patient's family, and the disagreeable inconvenience that accompanies an isolation of the patient and quarantining of the family, to be followed by the mockery of a disinfection of non-infected apartments, and perhaps destruction of clothing and furniture So great is the evil attending a safe diagnosis of this character Furthermore, the Health Office is led astray and official reports made to report falsely On the other hand, a case of diphtheria diagnosed as a simple tonsillitis may be the cause of breaking up a school or produce an epidemic, with an indefinite amount of sickness and many deaths, in illustration of which the following circumstances came under my observation

In a seminary patronized alike by day and boarding pupils, a day scholar came to the school having a sore throat, seemingly not severe enough to require professional attention or to keep the child from school A class-mate sitting near her contracted a severe diphtheria from that apparently innocent and simple sore throat, and which was quickly recognized by an attending physician At once this patient was removed to the near residence of her maiden aunt, who was a lady fifty years of age and not very robust in health Within three days this lady contracted diphtheria from her niece, and was so overwhelmed with the poison as to die after an illness of only four days, of what I believe to have been a heart paralysis In each of these two cases, aunt and niece, there was the characteristic exudation plainly visible in the throat, and there was not discoverable any other source or cause of the infection of the niece than the one named

Here was a progressive march of but two steps from a case so apparently benign in character as to be regarded as only a sore throat from cold, to a display of disease of the most malignant type, followed by death The length of time from the contagion of the second case to the fatal termination of the third was but one week

This narrative is not unlike that which might be told by almost any one present as reflecting a more or less similar experience, and is only told to illustrate the necessity for a correct diagnosis in all cases of sore throat, particularly in cases of children

It is well known that the visible appearance of the throat does not always indicate the presence of diphtheritic membrane or exudation when true diphtheria is present, for this exudate may be found only in the posterior nares, the fauces, or some location entirely out of sight without the skillful use of a laryngoscope, and even this instrument may not reveal its presence Hence our reference to diphtheria as an exceedingly insidious and treacherous disease We do not, with the ordinary visual means of diagnosis, always know just how and where to find it

Not long ago science came to our aid, and the presence of what is now known and designated as the Klebs Loffler bacillus is regarded and recognized as characteristically pathognomonic of the disease This discovery is of inestimable value, but, unfortunately, the ability to make a bacteriological culture and microscopical examination is not possible for the general practitioner of medicine, who is actively engaged in business And, furthermore, it is no disrespect to say that many practitioners are unqualified to make such examinations, as the whole science of bacteriology is a growth of the last ten years So that it may be truly said that only a few of our young members have had the advantage of such a training in special laboratory courses as to enable them to do this invaluable work when called upon

To meet the situation and the exacting conditions required in order to utilize the science of bacteriology, the New York City Board of Health has hit upon a most admirable plan for effecting this purpose, in which it has undertaken to provide laboratory facilities for all practitioners of medicine in that great city, and to do it free of charge to the physicians So that all the doctor has to do when called to a case that is suspicious is to rub off from the throat and fauces some of the visible secretion, by means of a swab of cotton, and transmit it at once on a culture-medium, that is provided by the Board, to certain drug stores, which are recognized as official depositories for this purpose, and having a direct connection with the special laboratory of the Board, where examinations are conducted This system is so perfect that within less than twenty-four hours the doctor can ascertain (by telephone) the true character of the secretion he has sent for examination If his diphtheritic suspicions are confirmed, the necessary prophylactic precautions may be continued

This plan has been so successful in its workings in New York as to call forth the highest encomiums of praise Within a period of three months there were examined in the New York Board of Health's laboratory 431 cultures, obtained in the manner described, and there was found the true diphtheritic or Klebs Loffler bacillus in 301 cases, and what is recorded and reported as false or non-infectious diphtheria in 130

What a world of satisfaction is revealed in a report like this, and what a deal of success in treatment and in the use of prophylactic measures must have followed this admirable plan of procedure! Yet, further, it inferentially tells us in unmistakable language that every city and county town should have connected with it a bacteriological laboratory, having facilities to take all cultures sent to it for examination, and make early and reliable reports to the physician for whose information the examination is made Such examinations would be invaluable in all suspicious cases, whether supposed to be diphtheria or some other infectious disease In fact, the utility of these convenient county and city laboratories could be extended in application to agricultural chemistry Furthermore, such little laboratories conducted in all our cities and county towns would be of untold value to the world We should never forget that Jenner and Koch were both country practitioners of medicine at the time they made their scientific observations that have been of such incalculable benefit to our race

The one purpose of this paper, more than all else, is to direct the attention of the members of the Mississippi Valley Medical Association to the great advantage to accrue to themselves and to the people by the adoption of the suggestions made, and which are believed to be applicable in every city and county town For it is only by the adoption of some such means as that made use of by the New York Board of Health that the general practitioner can have the benefit of cold science in the making of a diagnosis in cases of suspicious sore throat Further benefits to be derived from the establishment of small local laboratories might be spoken of as collateral to those mentioned, but the primary purpose, and the one to be most quickly appreciated by the people, will be in its enabling every physician to enjoy the benefits of a sure diagnosis in incipient and doubtful cases of infectious diseases

BOOK NOTICES

Transactions of the American Surgical Association Vol XI Edited by DeForest Willard, M D Philadelphia W J Dornan 1893

The present volume includes papers by Prof Senn on direct fixation of the fragments in compound and ununited fractures by the bone ferule, an entirely new method, a paper by Prof John Collins Warren, on "Hypertrophies and Degenerations of Cicatrices and Cicatricial Tissues," a paper on the "Surgery of the Gall Bladder," by Maurice H Richardson, M D , a paper on the "Surgical Treatment of Cervical, Thoracic and Abdominal Aneurism," by Prof Chas B Nancrede, a contribution to the "Surgery of the Rectum," by Arpad G Gerster, M D , a "Report of a Case," by Prof Roswell Park, a paper on the "Surgery of the Prostate," by Prof J William White, a paper on the "Bacillus Coli Communis," by Prof Roswell Park, another case report by the same author, and an article by the same on "Sarcoma of the Tonsil," a paper on "Retro-Pharyngeal Growths, by J Ewing Mears, M D , a paper on "Operations for Appendicitis without removing the Appendix," a report of ten cases of "Ankylosis of the Elbow Joint," by Prof J S Wight, and papers by Drs P H Millard, S J Mixter, J McFadden Gaston, H L Burrell and A B Miles

These papers have been generally published and are doubtless familiar to the readers of The Journal The volume is well printed and carefully edited

A Treatise on the Science and Practice of Midwifery By W S Playfair, M D , F R C P , Professor of Obstetric Medicine in King's College, *London* *Examiner* in Midwifery to the Universities of Cambridge and London, and to the Royal College of Physicians Sixth American from the eighth English edition Edited, with additions, by Robert P Harris, M D In one octavo volume of 697 pages, 217 engravings and 5 plates Cloth, $4 00, leather, $5 00 Philadelphia Lea Brothers & Co 1893

It is like carrying coals to Newcastle to commend a book to American readers that has already passed through five editions, and we can only say that it bids fair to be as popular as its predecessors The author has thoroughly revised this edition

The principal changes are the results of the statistics of the Porro Cæsarean and Sigaultian operations The editor has "abandoned the term *laparotomy*, and the prefix *laparo* as applied to abdominal surgery, and not to flank incisions, and the term cœliotomy, and the prefix *cœlio* substituted for them" The American editor has also striven against the tendency of the author to favor craniotomy

The publisher's work is all that could be desired for a text-book of this character

Clinical Gynecology Being a Hand-book of Diseases peculiar to Women By Thomas More Madden, M D F R C S Ed Obstetric physician and gynecologist, Mater Misericordiæ Hospital, Dublin, etc With 259 illustrations 80 cl pp 561 Philadelphia J B Lippincott & Co 1893 Price, $4 00

Dr Madden who is well known in America, has produced a book that is at once pleasing and instructive The style is attractive, and the author has taken occasion to incorporate in the treatise much that he has gleaned in his long service at the Mater Misericordiæ Hospital

The American gynecologists receive full credit for their share in bringing the science of gynecology to its present high position

In regard to electrolysis for fibro myomata, the author regards it as sub judice While in twenty cases he has seen a cessation of the bleeding, he has not seen complete subsidence of the tumor in any case

The author's conservatism leads him to doubt whether hysterectomy should be practiced for the cure of fibroids, when as is well known, the active existence of the fibroid is limited On this topic he quotes in full from Dr Mundé of New York, with entire approval But it is well known that many changes of opinion have occurred in the last decade upon that subject

The volume in spite of the evident ignoring of European Continental literature, is a valuable and welcome addition to the surgeon's library

Anæsthetics and Their Administration A Manual for Medical and Dental Practitioners and Students By Frederic W Hewitt, M A, M D, Cantab, Anæsthetist and Instructor in Anæsthetics at the London Hospital, Anæsthetist and Lecturer on Anæsthetics at Charing Cross Hospital, Anæsthetist at the Dental Hospital of London and at the National Orthopedic Hospital Cl, pp 357, price, $3 26 London Charles Griffin & Co 1893

This work is a systematic instruction book for those practitioners and students who wish to learn the practice of the administration of anesthetics, and as well a reference book in doubtful cases The book is divided into four parts, Part One is devoted to "Preliminary Considerations," which includes a discussion of the properties and impurities of the different anesthetics, the condition of the patient, the nature of the operation for which required, the selection and method of its administration, and the preparation of the patient

Part Two The methods of administration of each variety, separately considered

Part Three treats of the management and treatment of accidents, and

Part Four of the condition of the patient after operation

This book is extremely useful and is one of the few that is really called for by the necessities of the times

Syphilis Its Treatment by Intra-Muscular Injections of Soluble Mercurial Salts By Edward Cotterell F R C S Eng, Surgeon (out-Patients) London Lock Hospital etc 16 mo cl pp 36 London John Bale & Sons 1893

In this little book, the author advocates the use of sozoiodol of mercury, with iodid of sodium The following is his formula

Sozoiodol of mercury 5 grs
Iodid of sodium, 10 grs
Distilled water, 200 min
10 to 15 minims for an injection

The patient should receive an injection about once a week for about six or seven weeks or until all skin and throat manifestations have disappeared, when once a fortnight will be found sufficient for another three or four months After this, once a month will suffice

A Practical Treatise on Diseases of the Skin For the use of Students and Practitioners By J Nevins Hyde, A M, M D, Professor of Dermatology and Venereal Diseases in Rush Medical College Chicago New (3d) edition In one octavo volume of 802 pages, with 9 plates of which 3 are colored, and 108 engravings Cloth $6, leather, $5 Philadelphia Lea Brothers & Co 1893

This popular text-book, as will be seen, has now passed to its third edition Thirty five new diseases are mentioned in this that were not treated of in the former editions The systematic arrangement, clear descriptions and conciseness of statement which have made the work a favorite in the past are still conspicuous

The author adheres to the classification adopted by the American Dermatological Association while at the same time he admits that no classification yet proposed has met with general acceptance The nomenclature is, however, more logical and complete than that in the Nomenclature of the Royal College of Physicians, which is daily growing more and more behind the age

The metric system is used throughout the book, not, however, to the exclusion of the old system, and the latest investigations have been incorporated

NECROLOGY

Dr D M Carter of Modoc, Ind, died October 14

Dr James S Carson of Webster, Pa, died October 17

Dr J D Arrington of Hartsboro, Ga, died October 16

Dr James Henry Bodge of Newton Centre died in Boston, October 19 He was the son of Noah and Lydia C (Mann) Bodge and was born at Boston, June 26, 1841 He studied medicine at the Harvard Medical School, graduating in 1867.

Dr P F Hulshizer, a resident of Stewartsville, N J, died October 22, at the Roosevelt Hospital, New York He was a member of the Presbyterian Church at Stewartsville Deceased was about sixty years of age and is survived by his wife, one brother and two sisters

Dr Charles H Fisher, President of the State Board of Health of Rhode Island, died at the Continental Hotel, Buffalo, N Y, at 2 o'clock October 21 Dr Fisher was 72 years of age, he had stopped off at Buffalo en route home from the World's Fair and attendance on the Health Congress He was taken ill on the train His illness developed into pneumonia which, owing to his advanced age, made rapid progress, early showing signs that it would result fatally

Dr A W Heise of Joliet, Ill, died October 22, aged 70 years He was the oldest and best known man in his profession in the State He was born in Bramsche, Hanover receiving his education in the universities there He was house surgeon in the Marine Hospital in 1857 He served in the army as Surgeon of the Twentieth Illinois Regiment, and on the last call as Surgeon of the One Hundredth After Murfreesboro he was appointed Brigade Surgeon After Chickamauga he was appointed operator of the brigade and then Inspector of Hospitals and Consulting Surgeon of the corps In 1872 he was appointed prison physician at Joliet, holding the position many years He leaves a wife and son with a large estate

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE INCLUDING POSTAGE,
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO 68 WABASH AVE CHICAGO ILLINOIS

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J DUNGLISON, M D Lock Box 1274 Philadelphia Pa

SATURDAY, NOVEMBER 4, 1893

THE ARMY AND METEOROLOGY

Under this heading, a recent editorial in an army journal abstracts the facts detailed in a paper by MAJOR CHARLES SMART, "on the connection of the Medical Department of the Army with the development of meteorological science in the United States," read at the Congress of Science in Chicago, Ill , in August last

"The credit for instituting the Army meteorological service has been given to GENERAL JOSEPH LOVELL, Surgeon General of the Army, who in 1819 directed surgeons at military posts to furnish quarterly reports of weather, but DR SMART has found from the records that DR JAMES TILTON of Delaware, a Revolutionary War surgeon, was the first to suggest a diary of the weather in 1814 He was occupied at the time on the Northern frontier, looking after the interests of the sick and wounded While DR TILTON suggested the system he was interrupted in carrying out his idea by the war with Great Britain and it was left to DR LOVELL to take up the suggestion and develop its usefulness In 1826 the first results of this work were given in a register, prepared under the direction of DR LOVELL There were eighteen points of observation, including Washington, at that time In 1840 another publication on the subject was issued, and in the same year an enthusiastic meteorological scientist named ESPY was appointed to collate material on this subject He established a voluntary system of observation and sought to develop the phases of storms His first report contained twenty nine beautifully engraved charts, illustrating the weather of the previous three months DR SMART says the merest glance at ESPY's charts demonstrates the fact that telegraphic communication was the only thing wanting to enable that enthusiast to plan the very weather service that we have at the present day ESPY's work resulted in the detail of a board of officers to formulate directions for making observations Invitations were given to colleges and students of meteorology to cooperate with the department, and an officer was detailed to give his chief time to the subject

It was in this work of the Army Medical Department that GENERAL ALBERT MYER, then an assistant surgeon, had his attention directed to meteorological science He had been appointed in 1854 and resigned in 1860 to become the Signal Officer of the Army During the war the discovery and transmission of information regarding the movements of the enemy's forces absorbed all the energies of the newly-formed corps, but at its close in 1866 GENERAL MYER, who had established a signal corps with himself at the head, and with the recollection of the Medical Department's meteorological work and the suggestions of ESPY before him, secured authority in 1870 to undertake the observation of storms and the prompt signaling of their approach The observations were reported by telegraph to Washington, and the complete observations were plotted on a map after the fashion of ESPY's early charts "MR ESPY knew how the storm had traveled, GENERAL MYER knew how the storm was traveling" Since 1874 all meteorological reports from Army medical officers have been turned over to what is now the Weather Bureau, and to this day that bureau is not wholly independent of the officers whose labors in the past have done so much to establish it There are many parts of this vast country occupied by military posts where no station of the Weather Service has been established, and at these places, some fifty in number, the medical officers keep up their observations as their predecessors did in 1814, when the first order for a weather diary was issued, and DR SMART rightly remarks, "long and faithfully have the medical officers of the Army obeyed that order, and with honorable pride they can point to the results which have been achieved"

THE VERMONT STATE MEDICAL SOCIETY

This Society lately held its eightieth annual meeting at Rutland It was largely attended, and made prominent by the number of new members who joined There are about four hundred and fifty regular practicing physicians in the State, two hundred of whom are active members of the State Society Great efforts are being made to have every physician in the State join

The Secretary, DR HAWLEY of Burlington, in his admirable report, after calling attention to the needs and advantages of an active membership in the State Society, refers to the National Association as follows.

"I feel it a duty to call attention to the AMERICAN MEDICAL ASSOCIATION, as the great leading Society of this country, one that we should support in every way with hearty zeal and interest Its officers, JOURNAL and editors are representative men, whose work we should be familiar with We should join as members and receive THE JOURNAL, and thus keep in touch and sympathy with medical progress all over the country I urge every member of this Society to join this ASSOCIATION, I will receive the membership fee of five dollars, from all who are in good standing with our Society, and transmit it to the secretary You will receive THE JOURNAL weekly for one year I am sure you will profit very largely by its weekly visits, and have a permanent interest in a National organization that aims to help and assist every medical man in the country "

The number of papers read at this meeting was larger than ever before, and some of them of great interest It is a curious fact that consumption appears to be the most prevalent disease in this mountain State Fifteen per cent of all deaths come from this disease The Vice-President's address, (Dr Brewster) was devoted to the various plans of treatment found valuable Drugs were considered of secondary importance to general hygienic measures Cod liver oil and creasote were used with good effect as adjuvants in treatment

Much importance was given to the communication of the consumptive bacilli by dried sputa The great necessity of destroying the sputa by fire was urged, and cases were mentioned of contagion from neglect of this measure Dr Linsley of Burlington, urged that the diagnosis of consumption could be made by every physician, by the microscope, with absolute certainty, and by little practice He gave a lantern exhibition of photo-micrographs of the consumption bacilli in various stages

The President, Dr Wilder, gave a very thoughtful address, on medical ethics and duties The two prize papers were on "Septicemia" by Dr Sherwin, and "Peritonitis" by Dr Pond

It is a fact of considerable interest that the profession in this State have more than usual self reliance and independence of character Living in valleys, and on hillsides widely separated by high mountain ranges, they are from necessity obliged to do all sorts of medical and surgical work, often alone and without aid or assistance As a result, they become very practical men, who are obliged to both think and act quickly and correctly Dartmouth College on the east side, and Burlington University on the west side of the State, are both excellent medical schools which draw largely from these mountain villages, and send back many clear practical physicians

It is also pleasant to note that the practice of medicine has in this State retained something of the old-time chivalry and respect which followed the family doctor half a century ago The physician in these mountain villages is yet the central oracle and authority, and moves about in a circle of devoted patrons, as both healer and teacher

EXHIBIT OF THE ILLINOIS STATE BOARD OF HEALTH

The exhibit of the Illinois State Board of Health in the Section of Hygiene in the Columbian Exposition, consisted of eleven maps and twenty diagrams, showing a graphic presentation of the relations between locality, population, water supply sewerage, etc, with reference to the prevalence and causation not only of typhoid fever, but the zymotic or preventable diseases generally. They are the results of an investigation into the epidemic of typhoid fever of 1891, and include the years 1890, 1891 and 1882 There are six mortality maps, and on the margins are explanatory notes, with the death rates per 1,000 of typhoid fever and other zymotic diseases Map No 7 is a population map, and on it is presented the influence of density upon life, and to a great extent the conditions under which people live Map No 8 illustrates the water supply system of Chicago and the points in Lake Michigan at which water was taken Maps Nos 9 and 10 show the sewer system and the contour of the site of Chicago The contour map shows the ground made by filling, which is mainly in the central part of the city and along the Chicago River There is also a chart of the water sheds, and tables giving the rainfall since 1870, and showing its effect in polluting the water supply Also a table giving the amount of sewage pumped from the Chicago River into the Illinois and Michigan Canal since 1887, all bearing upon the causes that affect life In some respects the exhibit is unique, and in order to be appreciated must be carefully studied, and there is no doubt that there is here laid the foundation which, if properly utilized by the health officials, will result in a decided improvement of the sanitary condition of Chicago

THE CLOSE OF THE WORLD'S FAIR

The object lessons that have been exhibited at the World's Columbian Exposition, have been of the greatest value to all the people of this country Whether one attended the Exposition or remained at home, its effect will nevertheless be felt by all Those who studied the exhibits carefully will put the lessons in practice, so far as is practicable at their homes, and thus the whole country will be the gainer

There is one regret, that is that our noble profession, which is at once a science and an art, did not have a separate department in which all that distinctively belonged to the medical profession could have been collected and exhibited

The Journal has from time to time since July last, given brief editorial accounts of some of the important exhibits of interest to medical men, but we are fully aware that we have merely glanced at some of the more conspicuous ones Many that deserved notice have not been reached, and others were almost buried in the great mass We sincerely hope that our brethren in Europe may induce the management to grant them a separate department at the next World's Fair, which we understand is to be held at Antwerp

A LICENSE TO PRACTICE MEDICINE INCLUDES SURGERY

Many are the devices resorted to for the purpose of avoiding the payment of doctors' bills In the case of Stewart v Raab, decided by the Supreme Court of Minnesota, Sept 8, 1893, just reported, it was contended that a person holding a certificate to practice medicine could not lawfully practice surgery, nor recover for professional services which included the performance of surgical operations The statute under which this question was raised is entitled, "An Act to regulate the practice of medicine in the State of Minnesota," and the first section prescribes that every person practicing medicine in any of its departments shall possess the qualifications required by the Act To persons possessing these qualifications, certificates shall be issued by a board of examiners, and these certificates authorize the possessors to practice "medicine and surgery" in that State The terms "practice of medicine," in the title of the Act, and "practicing medicine," in its first section, are used, the court says, in the broad and popular sense in which they are generally understood, applied and, in fact, defined One practicing medicine, practices "the art of preventing, curing, or alleviating diseases, and remedying as far as possible the results of violence and accident" Therapy is the treatment of disease, and surgery is therapy of a distinctly operative kind A certificate which, in terms, authorizes the possessor to pursue the practice of medicine under the conditions of such a statute as the above, necessarily includes surgery The statute does not require a license or certificate for each department in medicine Consequently there is nothing whatever in the point that because surgery is not expressly mentioned in the certificate, the holder thereof violates the law when performing surgical operations

SOCIETY NEWS

The Tri-State Medical Society

Annual Meeting, held at Chattanooga, Tenn

TUESDAY, OCTOBER 17—MORNING SESSION

Meeting called to order by President Richard Douglas, M D

Prayer by Rev John A Stevens

A new constitution was read by the Secretary and made a special order for Thursday morning

A paper by Dr J W Russey of Chattanooga, was read, entitled,

TREATMENT OF PUERPERAL MASTITIS

Compression of more general utility than any simple measure, both prophylactic and curative To be efficient for former purpose, must be used early after labor The chest binder of Dr Guitéras a most satisfactory means of applying pressure If abscess forms, pus should be evacuated early and perfectly Washing the abscess cavity preferable to drainage tubes If drainage is necessary, horse hair to be preferred to rubber tubing Great care should be taken in selecting point for incision, if circumstances admit, on account of scar in cosmetic point of view

Dr W G Bogart—said that mastitis could be prevented by proper prophylaxis The breast is liable to injury by manipulation He had found only one pump satisfactory, by which the breast is steamed at the same time that the milk is drawn out In the early stage try abortive treatment, if abscess threatens, poultice, later, incision, cleansing with peroxid of hydrogen and pack with iodoform gauze

Dr G A Baxter—The chief point is the free exit of milk, preceding this, the excessive secretion of milk produced by improper diet and the ordinary diet should be used—a liquid diet is especially improper As soon as there is any hardness of breasts anoint them with warm castor oil

Dr G W Drake—believes in medical treatment, the internal administration of bichlorid of mercury for the revulsive effect

Dr Richard Douglas—called attention to the anatomy of the gland Prof Dugas is entitled to the credit of originating the only rational treatment—that by pressure The cause is due to the presence of micrococci The milk forms a favorable nidus for their development

Dr J A Goggans, Alexander City, Ala, read a paper entitled,

TREATMENT OF THE DISEASES OF THE UTERINE APPENDAGES,

and presented specimens of ovaries

These cases all come from preexisting disease of the uterus, generally endometritis The treatment of this condition was given 1 by local treatment, 2, amputation of the cervix In all diseases of the uterine adnexa rest and abstinence from sexual intercourse necessary The three principal points of diagnosis in disease of the uterine adnexa are 1, repeated attacks of peritonitis, 2, repeated hemorrhages, 3, pain Indications for operation 1, those attending pelvic peritonitis, accompanied by tortuous and distended tubes, which may usually be felt in Douglas' pouch, behind the uterus This condition may be preceded by the history and symptoms of an abortion, a gonorrhea, or a tubal pregnancy, 2, the physical signs of enlarged and tender ovaries due to chronic abscess, 3, the physical signs of prolapsed and tender ovaries, accompanied by irregular hemorrhages and incapacitating pains, 4, some few cases of dysmenorrhea as the principal symptom, with a possibility of its being kept up by chronic disease of the ovaries and tubes, 5, where hemorrhage is the principal symptom, accompanied by the ordinary signs of grave pelvic disease, 6, in a few cases of general peritonitis, preceded by the symptoms of rupture of a preexisting pelvic abscess, ovarian abscess, pyo salpinx, or abscess in the appendages, developed during the progress of puerperal septicemia

Dr Richard Douglas—indorsed the position of the author as to the indications for operation, but each case must be decided on its own merits Removal of appendages will not cure hemorrhage from the uterus, the proper treatment of which is divulsion of the cervix

Dr P L Brouillette—was surprised that in the discussion of the subject, electricity had not been mentioned In his experience many of these cases had been cured by the use of this agent without curetting or removing the ovaries

Dr H Berlin—thought it a mistake to remove the uterine appendages for hemorrhage Electricity applied with positive pole inside the womb will control hemorrhage by destroying the mucosa if a strong current is used It would be impossible for the woman to conceive after this

Dr Brouillette—objected that the faradic current could stop the hemorrhage

Dr Berlin—said that his experience was only with the galvanic current which was generally used

Dr G W Drake—said that most physicians had not been educated so as to use electricity intelligently It might relieve hemorrhage by reflex action

Dr Brouillette—thought that electricity should be tried before any operation was advised

Dr Goggans—in closing the discussion, said he was not in favor of removing the ovaries for mere symptoms—only for organic disease Most of the general practitioners who use electricity fail to make a differential diagnosis In the cases presented, the conditions show that no cure could have resulted from the use of electricity

Dr R M Harbin—presented a case on which he had performed tracheotomy for membranous croup

Adjourned

AFTERNOON SESSION

Dr R M Harbin, Calhoun, Ga, read a paper entitled;

MEMBRANOUS CROUP, WITH REPORT OF CASES TREATED BY TRACHEOTOMY

Conclusions—1, membranous croup is almost invariably fatal without surgical treatment, and with medicinal treatment but little can be hoped for , 2, any hope for an expectant plan of treatment is nil, and for the few cases that recover without surgical treatment don't demand a consideration , 3, tracheotomy is a justifiable surgical procedure, and should be performed in all cases where our therapeutic resources have been exhausted and the patient is in danger of suffocation In hopeless cases it affords a chance for recovery or promotes euthanasia , 4, statistics would be better if infectious diseases were eliminated, as diphtheria, etc , 5, tracheotomy keeps the patient alive until the pseudo-membrane resolves into a muco-purulent liquid and is expectorated through the tube , 6, in all human certainty, the cases reported would have died without the operation , 7, the importance of after treatment in keeping tube moistened with lime water and the room at an equable temperature , 8, tube should not be removed until purulent nature of sputa ceases, which is about eighth day , 9, a lack of instruments is no excuse for the non performance of the operation, as a tube only is necessary in addition to general operating instruments

Dr J R Rathmell —emphasized the uncertainty of the diagnosis between diphtheria and membranous croup, and the almost certainty of death

Dr W F Westmoreland—thought the paper valuable, as it called attention to the value of surgical interference The surgeon was generally called too late Tracheotomy, in itself, is not a dangerous operation He had used cords, fastened in the edges of the wound and tied behind the neck, and thought this practice resulted more favorably than with the use of the tube

Dr H B Wilson—while in the Children's Hospital, N Y , treated twenty two cases of diphtheria, and all of these died except two, in which tracheotomy had been performed , in another epidemic, out of forty cases, there were but few deaths

Dr Frank Trester Smith—thought the operation of little danger In the statistics, death is ascribed to the operation instead of the cause for which it was performed Where tracheotomy was performed for foreign bodies, the statistics are good The operation adds but little to the danger of the patient

Dr H Berlin—said that experiments on dogs in which croup had been artificially produced, showed that the effects of early operation were good There was little danger from the operation itself

Dr G A Baxter—read a paper entitled,

TREATMENT OF THE OMENTUM IN HERNIA OPERATIONS,

in which he advocated the removal of the redundant omentum, and reported a case in which a very large hernia consisting only of omentum was removed, weighing four pounds The omentum was shown, also the patient

Dr W F Westmoreland—thought the omentum could be removed in toto without effecting the patient at all, unless it might be from hemorrhage or adhesions And if any difficulty in reducing omentum, it should be resected, or if there is any suspicion of that, the vitality is effected

Dr E E Kerr—asked if the tumor was omentum, or a growth from the omentum

Dr R M Cunningham—thought the specimen looked like a growth

Dr W F Westmoreland—said that in cases of hernia of the omentum the tissue would hypertrophy

In answer to a question, the patient stated that the growth had enlarged suddenly

Dr H Berlin—stated that in the cases where the omentum protruded as here, the structure was changed and it became a lipomatous growth

Dr J A Goggans—agreed with Dr Berlin as to the pathology of the case The omentum should be cut off whenever it protrudes

Dr Richard Douglas—raised the point that the stump should be tied in sections, not as a whole He preferred silk to catgut Kangaroo was better fitted for sutures than for ligature

Dr Baxter—in closing the discussion, said that the tumor was composed of arealor tissue, filled with fat The kangaroo tendon was not too stiff for tying the stump

Dr J R Rathmell of Chattanooga, read a paper entitled,

SEROUS AND WATERY DISCHARGES DURING GESTATION, THEIR SOURCE AND SIGNIFICANCE

The author believes that the profession has been mistaken in accepting the theory that these discharges were from the amniotic sac Rupture of the sac is always followed by the expulsion of the fetus There are two other sources from which these discharges can come 1, from the cervix, 2, from the decidua Cases are related from the writer's observation, illustrating all three sources

Dr J B Cowan—said the discussion of this question was interesting, but not satisfactory In one case in his experience he thought the discharge from a case of hydrosalpynx There had been an occasional gush of water after the pregnancy

Dr Richard Douglas —said that hydrorrhea is frequently met with in women who have had syphilis or gonorrhea When the amniotic sac is opened, it is followed sooner or later by an expulsion of its contents, If the fluid is amniotic, it will contain urine , otherwise not

Dr G A Baxter—related a case in which there was a large flow of amniotic fluid following a fall He had delivered the woman of a dead child, five months later A partial rupture is not always followed by expulsion of the fetus He thought a chemical analysis would determine whether the fluid was amniotic

Dr Geo R West—stated that a serous discharge from the cervix might be from a cancerous condition

Dr J R Rathmell—in closing the discussion, thought that it might be possible in the early months of pregnancy that the discharge might come from the tubes None of his cases ever suffered from gonorrhea

NIGHT SESSION

A paper was read by Dr R M Cunningham, Birmingham, Ala , entitled,

RECENT OBSERVATION OF CROUPOUS PNEUMONIA, WITH SPECIAL REFERENCE TO PROPHYLAXIS AND TREATMENT

This paper was largely statistical, based on an epidemic among the convicts at Pratt Mines

Conclusions —1, an unusually severe, general and fatal endemic of croupous pneumonia at this prison, coming on without apparent cause and ending, practically, abruptly, 2, that more than double the percentage of negroes was attacked when compared with the whites , 3, that it affected alike all ages , 4, that it attacked the robust and strong, the same as those in more or less bad physical condition , 5, that it affected those who worked outside the same as those who worked inside the mines , 6, that an unusually large number was suddenly and violently attacked , 7, the pulmonary tissue involved , 8, the unusually high temperature, fast pulse and respiration , 9, the low mortality considering extraordinary severity of the endemic, and the character of the patients

For prophylaxis, disinfection was tried by washing the cells with a solution of bichlorid and steaming the bedding The epidemic abruptly terminated, and there have been no cases since, the author believes as a result of the disinfection Treatment consisted in the administration of stimulants and antipyretics in a majority of cases For shock, a solution of common salt was injected hypodermically, (hypodermoclysis) one dram to a pint of sterilized water. This he believes will prevent anti mortem clots, and is a remedy for shock Specimens of antimortem clots were presented He concluded strychnin was the best stimulant, baths the best antipyretic Quinin and antipyrin have no place in the treatment of the disease

Dr W L Nolan—could not see wherein filling up the system with a saline solution would benefit the patient

The statistics show the death rate to be about the same under different lines of treatment

Dr G A Baxter—believed the remedies of the past of little value and Dr Cunningham has made a discovery of value to the world It was the chlorid of sodium which affected the condition of shock, not the filling the tissues with the solution

A paper was read entitled,

SOME OF THE DISEASES OF THE FEMALE URETHRA,

by Dr J C LeGrand of Anniston, Ala The paper related cases in which relief had been experienced from treatment, and others in which no treatment was of any avail

Dr J A Goggans—could not add anything to the treatment He had used an infusion of pterus aquilina (brake fern), with good effect We should look for disease of neighboring structures

Dr H Berlin—had tried every remedy The only remedy in some of these cases is to produce a vesico-vaginal fistula

Dr Richard Douglas—said that in the diagnosis between organic and functional disease, inspection was necessary Urinary disorders may be produced by abnormal conditions of the surrounding structures The treatment suggested by

Dr Berlin is the only rational method The relief is complete and instantaneous These cases can retain the urine partially The opening is not closed for six months to a year

Dr I B S Holmes—related a case in which the operation was a success

Adjourned

Wednesday, October 18—Morning Session

Opened with prayer by Rev C G Jones

Dr W Frank Glenn of Nashville, read a paper on the

TREATMENT OF SEPTIC BUBO

He treats the cause of gonorrhea or chancroid, and makes direct applications to the glands He advocates rest, the application of ice, the injection hypodermically of 1 per cent solution of benzoate of mercury and a compress bandage When suppuration has taken place, free incision, etc *It would be best to excise the gland* as quick as it becomes inflamed After suppuration the case must be treated as a chancroid

Dr R M Cunningham—thought it best to remove the gland and if possible get union by first intention

Dr J W Handley—*had not gotten good results from* excision

Dr R J Trippe—thought the best thing to do was extirpation of the glands

Dr H Berlin—said that a clean excision was better than incision with curetting etc

Dr Glenn—was opposed to excision except in the early stage He does not believe in aspirating

Dr J B Murfree read a paper on the

DIAGNOSIS AND PATHOLOGY OF FRACTURES NEAR THE ELBOW JOINT

The elbow is a hinge joint and admits of a variety of motions It possesses the power of extension, flexion, supination, pronation and limited lateral movement The bones that form this joint are the lower end of the humerus and the upper ends of the radius and ulna The humerus has an expanded termination, which forms the condyles, the ulna has the olecranon and coronoid processes, these with the head of the radius form the joint and all are liable to fracture Fractures near the elbow joint are caused by external violence, (direct or indirect, usually direct,) and muscular contractions rarely Fractures near the elbow joint are diagnosed by the usual signs of fracture, to-wit Loss of function, deformity, preternatural mobility and crepitation All of these may not be present, and the diagnosis may be made by discovering the broken fragment in an abnormal position The pathology is the abnormal relation of the bones of the forearm, solution of the continuity of the bone formation of callus excessive or at abnormal points inflammation of the bone, occasionally necrosis, inflammation and suppuration of the soft tissues, resulting in hypertrophy and induration, pressure or laceration of the nerves and blood vessels As a result the movements are impaired and the joint is stiff or awkward Abscess sometimes results, and sometimes paralysis

Dr T Hilliard Wood of Nashville, read a paper on

PATHOLOGY OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR

The Doctor spoke of purulent median otitis, as a cause of mastoid periostitis, mastoiditis, meningitis, cerebral abscess, phlebitis and pyemia He then gave the pathology of each and its symptoms He urged attention to these sequelæ, that important preventive and curative treatment may be adopted

Dr G C Savage of Nashville, read a paper entitled,

TREATMENT OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR,

in which he advocated measures preventive of the sequelæ *of inflammation of the middle* ear, outlining his treatment for the relief of pain, the free and frequent use of a solution of chloroform in olive oil, one dram to seven, allowing the solution to remain in the ear ten minutes at a time, when there is a discharge the use of a warm solution of peroxid of hydrogen, letting it remain in the ear until bubbling ceases, and repeating this as long as there is any bubbling For mastoiditis he recommended in addition to the above, and *if this* did not relieve, opening of the mastoid

Dr N C Steele—wanted to impress the importance of attending to cases of suppurating ears Most of *them do not* live long so that insurance companies will not insure their lives

Dr E L Jones—emphasized the fact that in the cases of middle ear disease death resulted frequently, and a proper diagnosis was never made

Dr L B Graddy—said that until the importance of the subject was realized, patients would continue to die by the thousands annually The use of olive oil alone is as efficient as with chloroform Boracic acid renders the tissue a poor soil for the growth of the microorganism and is a good remedy Peroxid of hydrogen is harmless but of no use

Dr W F Westmoreland—said that in mastoid cases the operation was postponed too long In a certain class of cases, operation is necessary No case of abscess of the brain ever recovered without operation Without proper drainage the use of peroxid is dangerous

Dr B I Travis—had used chloroform spray in his own person with good effect He used bichlorid, nitrate of silver solution free irrigation and thorough drainage

Dr Savage—said that if he had said nothing but to advocate the use of chloroform, he would be repaid for coming and his hearers also

On motion the report of the Council was fixed as a special order for Thursday at 2 P M

Afternoon Session

Dr Willis F Westmoreland of Atlanta, read a paper entitled,

TREATMENT AND PROGNOSIS OF FRACTURES ABOUT THE ELBOW

He flexes the arm at a little more than a right angle, in a position of rest This is the best position to prevent deformity In fractures of the olecranon process, it is not best to extend the arm fully He uses plaster-of-paris bandage

Dr G A Baxter—said that there was almost always impairment of motion and deformity He uses passive motion after a few days, extending the arm at first, later putting it into a flexed position

Dr Richard Douglas—said that Baxter's position was weak in first putting up the arm in extension, later in a flexed position Passive motion was a thing of the past By approximating the fragments, we use *the best means* to prevent anchylosis

Dr R M Cunningham—believes *in putting up the fracture*, waiting for union and then breaking up the adhesions

Dr Murfree—said *that* absolute rest was necessary to insure repair of the bone

Dr Westmoreland—said *that anchylosis* might be produced by massage in certain conditions All who put up the limb *in extension* acknowledged that it was wrong by changing the position It required more skill than most *practitioners possess, to put on* a plaster of paris bandage properly

Dr Richard Douglas delivered the President's Address

RESPONSIBILITIES OF THE ABDOMINAL SURGEON

As President he advocated that a committee should select two or three members to write on selected subjects for the next annual meeting He also thought it would be better *if the* Society would change its place of meeting, annually He emphasized the necessity of thorough training, cleanliness proper diagnosis, and realization of the responsibility on the part of the abdominal surgeon

Dr W E B Davis—thought it criminal for those without experience *to open the* abdomen

Dr C G Savage—said this would cut off ambitious young men, as they could not have the experience *without* operating

Dr Davis—said he meant surgical experience, not necessarily abdominal surgery

Dr W C Townes—protested *that* it was not necessary to have experience by operating on the living subject *Postmortems* were of value

Dr R M Cunningham—said that this was a specialty and required special skill, *special* apparatus, in emergencies the general practitioners should operate, otherwise a s[illegible]cialist ought *to be called*

Dr W E B *Davis* of Birmingham, Ala, read a [illegible] entitled,

THE TREATMENT OF STONE IN THE BILIARY DUCTS

in which he advocated in those cases when it was [illegible] to remove *the calculi from* the common duct without [illegible]ing the duct, after making the incision if it was [illegible]cult to stitch up the duct and if the patient's [illegible] would not warrant a long operation, to introduce [illegible] tube and pack around it with iodoform gauze [illegible] attempting to repair the duct These cases are [illegible] a bad condition to stand a prolonged operation

Dr Paul F Eve—read a paper on

CHOLECYSTOTOMY,

and advocated the removal of the calculi whenever detected

Dr W C Townes—said that three cases where he had made the diagnosis of gall stones had been relieved by large doses of olive oil If medicinal measures did not relieve, operation should be resorted to He presented a patient on whom he had operated

Dr J B S Holmes—advocated operation if medicines failed to relieve If the tube was occluded between the stone and intestine he would use Murphy's button to produce anastomosis between the duct and the intestine

Dr Richard Douglas—believes that the operation of producing anastomosis between the duct and the intestine a flimsy procedure

Dr J A Goggans—related a case in which floating kidney had been diagnosed, but which turned out to be a case of gall stones

Dr R M Cunningham—related a case where operation had been advised, but the attacks ceased after the administration of large doses of olive oil

Dr W G Bogart—would operate in case of impaction

Dr G C Savage—said that the mistake made by those who used oil was that they did not put chloroform in it

Dr Davis—in closing the discussion, said that these cases do not get well, as a rule, without operation The operation should be short or the patient will die from the shock You can never know that the last stone has passed

Night Session

Dr Frank Trester Smith—presented a case in which there had been

PROLAPSE OF THE IRIS,

which had been partially reduced by pushing it in with instruments and the reduction completed with the use of eserin

Dr J W Handly of Nashville, read a paper on

TREATMENT ON VARICOCELE

The writer first speaks of the many methods and devices advanced by the medical profession in the treatment of varicocele, dividing the treatment into palliative and radical Laid some stress upon the use of a well fitting, properly adjusted suspensory as a most excellent palliative measure In milder cases, besides the above, advises sound physiological advice as regards sexual habits and constipation Mentions other palliative measures only to condemn them Describes briefly the earliest operations by Vidal de Cassis and Sir Astley Cooper, afterwards giving at length the operations of Keyes and Bennett, the ones now generally practiced

Dr W Frank Glenn—said that these cases were generally neglected advised operation, unless very small, If left to themselves, atrophy of the testes may result If a suspensory is used, it should be well fitted He sees no use in excising the scrotum

Dr J A Goggans—thought most of the cases were due to masturbation Dr Glenn had made a good point in not ligating all the vessels

Dr Paul F Eve—said that the spermatic artery and vein should not be ligated or atrophy of the testicle would result He believes in removing the redundant scrotum

Dr Willis F Westmoreland—removes the excess of scrotal tissue He expects union by first intention

Dr R M Cunningham—had examined several thousand men and had found not more than half a dozen with varicocele

Dr W C Townes—thought the condition more frequent among the wealthy, due to upholstered chairs and sedentary habits Dr Cunningham's cases were from lower classes He would give tonics and use a suspensory in cases not demanding an operation

Dr J R Buist—thought Dr Cunningham's statistics due to the fact that most of his cases were negroes

Dr Eve—stated that a United States recruiting officer had stated that out of twenty cases examined in one day, eighteen had enlarged scrotal veins He thought his statement that seven out of ten males had a tendency to varicocele within bounds All these were not operable cases

Dr Handly—in operating, would prefer local anesthesia unless the patient was very nervous

Dr L B Graddy of Nashville, read a paper entitled,

ETIOLOGY, PATHOLOGY AND PREVENTION OF OPHTHALMIA NEONATORUM

The etiology, pathology the same as gonorrheal ophthalmia or gonorrhea of the urethra, being produced by the gonococci—all of these cases are produced by inoculation Every abnormal discharged, toward the end of pregnancy, should be regarded with suspicion These cases are inoculated during the washing He recommended that the lids be washed by a 1 per cent solution of nitrate of silver which should be left on the lid twelve seconds, after which the eyes should be washed with clean water

Dr B F Travis read a paper on

TREATMENT OF OPHTHALMIA NEONATORUM

In the early stage he advises cleansing the eyes with a boracic acid solution and the application of cold water Later the use of strong solutions (40 to 60 grs to ounce) of nitrate of silver in the purulent stage

Dr G C Savage—in discussing the above paper, stated that there were cases on record where pus gushed from between the lids when they were first opened He believed that other fluids than gonorrheal would produce purulent conjunctivitis Crede's method is effective and apparently painless

Dr J B S Holmes—thought the responsibility rested with the obstetrician

Dr Richard Douglas—said that the responsibility went back of the obstetrician, that it rested with those doctors who failed to cure their cases of gonorrhea

Dr R M Cunningham—called attention to the fact that the negroes rarely were blind from this disease

Dr W Frank Glenn and J B Cowan—thought the disease always gonorrhea of the conjunctiva

Dr N C Steele—indorsed the use of strong solutions of silver, 40 to 60 grains

Dr J B S Holmes of Rome, Ga, read a paper on

MOVABLE KIDNEY

Pressure on the kidney always produces nausea and faintness—this is an important point in diagnosis If much disturbance, and kidney can not be kept in place with a bandage or an abdominal support, the kidney should be extirpated The operation was described We should be satisfied that the other kidney is in a healthy condition

Thursday, October 19—Morning Session

Prayer by Rev W J Trimble

On motion, that a committee of five be appointed, to whom should be referred the new constitution for revision and amendment, also the recommendations of the President and said committee to report to the Secretary, on the morning of the first day, next year, who will have changes proposed published Carried

Article IV of the constitution was changed so as to allow the Society to meet elsewhere

A motion was carried that none be allowed to vote or have the privilege of the floor who have not paid their dues for the current year

On motion, the Society reconsidered the vote to have the election at 2 P M, and proceeded with the election of officers The following were elected by ballot

President—J B S Holmes, Atlanta, Ga *Vice-Presidents*—James A Goggans, Alexander City, Ala, Dan H Howell, Atlanta, Ga, T Hilliard Wood, Nashville, Tenn *Councilors*—W E B Davis, Ala, G W Mills, Ga, J B Murfree, Tenn *Secretary*—Frank Trester Smith, Chattanooga, Tenn *Treasurer*—W C Townes, Chattanooga, Tenn *Recorder*—W L Gahagan, Chattanooga, Tenn

The consideration of a new constitution was voted a special order of business for the third day of the next annual meeting, at 9 A M

On motion, the Society tendered a vote of thanks to the President for the masterly and courteous manner in which he had presided

A committee, consisting of Drs J B Cowan, W F Westmoreland and W E B Davis, was appointed to draft suitable resolutions of thanks

Afternoon Session

The following committee was announced to revise the constitution Drs W E B Davis, R M Cunningham, J B Cowan, W F Westmoreland, W G Bogart

Dr Y L Abernathy of Hill City, read a paper on the

TREATMENT OF TYPHOID FEVER

The author claims that it is impossible to diagnose between typhoid and continued malarial fever in many cases He believes in an aggressive form of treatment, and advocates the use of quinin and mercury in these cases He also relies on hydrotherapy by the Brand method

Dr J B Cowan—could not indorse the use of quinin

His sheet anchor is alcohol, using it as coal in a grate, to allow the man to burn this instead of burning the tissues He gives salicylates in small doses—three and a half grains He had not seen a case of typhoid fever in fifteen years

Dr G T Prince—said that a typical case of typhoid fever was rarely seen The treatment must be varied according to the type In perforation, laparotomy should be performed By using *potass bromid first, he could use quinin*

Dr Reeves—in discussing the paper, formulated typhoid fever as follows an acute contagious *febrile affection* derived from an antecedent case of the disease and depending for its communication from person to person upon the presence of a specific microorganism, which is believed to be of well-known morphological characteristics—a *bacillus*—and which can be cultivated outside the human body The disease prevails less frequently in tropical and sub-tropical countries than in the temperate zone, is both endemic and epidemic in its visitations, attacks, preferably, young persons *and those in middle life*, is of long duration, but varying between ten and forty days *beyond* the *prodromic* period, which may cover from one to ten or even twelve days There is profuse diarrhea, or, at least, a relaxed state of the bowels, with "pea-soup" or "ocher-colored" stools, and at all stages a marked susceptibility to the action of laxative medicine, intestinal hemorrhage in many cases, and in a few perforation of the bowels, epistaxis, either slight or profuse, tympanites, with gurgling produced by pressure over the ileo-cecal valve, dullness of hearing, with mental hebetude, or morbid vigilance, headache, disappearing during the second week, delirium, either mild or violent, with *subsultus tendinum,* rose colored lenticular eruption during the second week, coming out in crops and disappearing in the same order, fever curve showing steady elevation of from one to three degrees in the evening with a fall of the same number of degrees in the morning for the first four or six days, and unlike the curve of any other acute febrile or inflammatory disorder, cough and bronchial râles singular prostration of muscular strength, early heart-failure and a dicrotous pulse The tongue soon becomes dry, and shows, in grave cases, a brown stripe in the middle with *sordes on the teeth* and gums, in fatal cases, death occurs during the third or fourth week, with the constant and characteristic lesion of the small *intestine involving Peyer's* glands, and with enlargement of the spleen Convalescence is tedious, true relapse is not infrequent, and the disease affords as perfect immunity from subsequent attack as does scarlet fever or smallpox

Not a New Disease—Belief in the spontaneous origin of the disease has greatly retarded the discovery and general diffusion of correct knowledge on the subject, for, by parity of reasoning, such faith is without substantial support when the question is studied with the life history of the human race On the other hand, the doctrine of permanency of original types of contagious diseases has, probably, as remote antiquity for its origin, as stable a foundation for all future time, and as many unanswerable arguments in its support, as the doctrine of the permanency of the different types of the human race—each tppe with its entirely different capacities physical and mental, and known to have existed for at least five thousand years

Dr P L Brouillette—believes the cold bath the best antipyretic, prefers using first a tepid bath and reducing the temperature of the water Quinin must be given in large amount within an hour to get antipyretic effect, as it is eliminated

Dr Willis F Westmoreland—said that tepid baths were less depressant than the cold baths

Dr R M Cunningham said 1, we have typical typhoid fever, 2, we have atypical typhoid fever, 3, we have typical malarial fever, 4, we have atypical malarial fever, 5, we have an unknown fever that I call continued Baths best antipyretics Whisky and strychnin best stimulants Four hundred and thirty four cases observed in four years Eighty typhoid—*ten deaths, eight* complicated One hundred and seventy eight continued—two deaths, both complicated One hundred and seventy six uncomplicated fevers—no deaths Does not believe in antiseptic treatment As a routine treatment he uses the mineral acids

The following resolutions were adopted

"For five years annually the Tri State Medical Society has enjoyed the hospitality of the medical fraternity of Chattanooga a hospitality that is only bounded by their opportunity to share the liberality and magnificent hospitality which particularly characterizes the Chattanooga doctor There must be something in the atmosphere or water, or more likely in the fact of this city being surrounded by these grand mountains which have the effect to draw out and develop the better qualities and higher instincts that belong normally to every man's heart, and these magnificent surroundings have succeeded in developing *a body of medical men that are not only an honor to the* profession, but have and are now giving to this beautiful city a reputation that has become national

"The Tri-State Medical Society *feels to day that we have* unloosed the cable, and from this day forward we are afloat *and will have our annual home in Georgia, and then* Alabama, and that we fully appreciate the sensation of a child leaving its paternal home and going out into the world to try its fortune We fully appreciate the importance of this step, and as we leave the home nest and wander in other lands, our thoughts, our affectionate remembrance and our prayers will center here, and our thanks and gratitude and heart-wishes for the medical fraternity of Chattanooga will ever grow brighter and brighter as the years go by Be assured that in the heart of every member of the Tri-State Medical Society the memory of many kindnesses and splendid *hospitality will ever remain a green spot, the memory a* thing of beauty and joy forever "

Dr W C Townes read a paper entitled,

PATHOLOGY AND TREATMENT OF GOITRE

This paper is based on the observation of cases seen during a recent trip through the region of the Alps For treatment, extirpation of the gland is advocated

Dr J E Reeves—said Dr Townes' paper was of more than common interest, notwithstanding the rarity of the disease in this country, and fully represented the general knowledge on the subject

The Secretary was voted a salary of one hundred dollars for the current year

Night Session

Dr C W Barrier of Columbus, Ga , read a paper on

THE ELASTIC DRESSING APPLIED TO INCOMPLETE ANKYLOSIS OF THE KNEE,

of which the following is a synopsis

The elastic dressing applied to incomplete ankylosis of the knee Report of case Description of the elastic dressing, with method of using it Indications of treatment of such a case 1, arrest the atrophy of the synovial membrane and restore it to its function, 2 break up existing adhesions and prevent the formation of others, 3, restore the tendons of the hamstrings to their normal length, 4, arrest of the atrophy of the tendon of the quadriceps and stimulate it to antagonize the hamstrings Conclude by showing how these indications are met better by the elastic dressing than by an operation or a fixed dressing Query If such dressings were more frequently applied in incipient ankylosis, would there not be a less number of cases of complete ankylosis, and still fewer radical operations for same?

Dr R J Trippe—had had *good results from breaking up* adhesion

Dr J B Cowan—said that many of these patients were neglected, and as a result there were many deformed joints

Dr Willis F Westmoreland—insisted on the importance of prevention A trivial injury may result in destruction of the joint

Dr H Berlin—related his experience with the

ACTION OF THE GALVANIC CURRENT ON THE UTERINE TISSUE

The paper contains the results of experiments A current was passed through the uterine tissue which was then subjected to microscopic examination In one case the experiment was made on the living subject previous to hysterectomy, in other cases the cadaver was used He concluded that curetting would accomplish the result much more quickly

Dr Geo R West—said that according to experiments electricity acted not only at the poles, *but also throughout* the tissue

Dr W E B Davis—believes that electricity has its place in gynecology, but that many claim too much for it Curetting is preferable, although the same result might be accomplished in many cases by electricity

Dr J B Cowan—thought the current was used in a milder form than to produce necrotic tissue

Dr W F Westmoreland—after spending much for electrical apparatus, had concluded to let it alone in most cases

Dr G W Drake—said that electricity had accomplished most by those who had studied the subject *It should not* be condemned from the reports of those who did not understand its use

Dr J P Stewart—thought that there was no doubt of the tonic effect of electricity

Dr H Berlin—said that he only wanted to prove the microscopical effect of the current and had found necrosis He had no effect from faradism

Dr J B Cowan of Tullahoma, Tenn , made an address on

MEDICAL ETHICS

He spoke of the violation of the code in consultations It is the duty of the medical societies to lift up the profession We get legislation to protect the people and to elevate the profession so that the code could operate on the members of it He called attention to the splendid organization of the profession in Alabama

Dr W F Westmoreland—thought the profession had reached that point where the code of ethics as a published docment should be abandoned

Dr G A Baxter—said that a consultant could steal a patient within the code of ethics

Dr J R Rathmell—believed in a written code The code is a statement of the principles which are the written result of the experience of the profession

Dr J P Stewart—said the written code was of value to protect us from those who violate it

Dr G W Drake—said that any argument for abolishing the code could apply equally to any written law, even to the Word of God We object to consulting with irregulars, not on account of their method of treatment, but on account of advertising

Dr Y L Abernathy—stated that we should follow the golden rule A code was needed for violators of the law

The following were read by title

"Report of Psychical Science" Chicago, August, 1893, Dr John E Purdon, Cullman Ala

'Significance of Albumen in the Urine in Pregnancy," Dr E T Camp, Gadsden, Ala

On motion, it was decided to hold the next meeting on the second Tuesday in October, 1894

Adjourned

Southwestern Association of Railway Surgeons —First meeting held in St Louis, Oct 26 and 27, 1893

The Southwestern Association of Railway Surgeons was organized at Walnut Ridge, about 1890, as the Missouri and Arkansas Railway Surgeons' Association, afterwards changed to the Missouri, Arkansas and Texas Association, and finally to the present name, this meeting being the first under its new name Previous meetings have been held at Walnut Ridge, Newport and Fort Scott, Ark , and one at Springfield, Mo The organization is on the plan of the National Association of Railway Surgeons

The meeting was called to order by the President, Dr F J Lutz, and Dr W B Outten for the Committee of Arrangements announced that a feature of the meeting would be the holding of surgical clinics at the different hospitals, in place of occupying the entire time in the reading of papers

Dr A B Shaw, President of the St Louis Medical Society, welcomed the Association to the city, and spoke of the importance of railway surgery and the growth of railway surgeons' associations

The President then read his address In explanation of the necessity of the existence of the Association, he referred to the underlying principle of all the mechanical arts—namely, the subdivision of labor The rapid strides which the healing art has made no longer enables even the most brilliant mind to encompass the knowledge requisite to successfully cope with both disease and injury, and the subdivision into medicine and surgery was but the first step in the recognition of the fact that perfection in either means exclusive devotion to and discipline in the one It is true the general surgeon so called is the safer counsellor and a more successful practitioner of his art than he whose attention is riveted from the first to but a single subdivision of surgery The later is apt to forget and overlook those general principles of surgical knowledge which are the foundation for the successful application of our art In the treatment of surgical affections the curative factors which determine the pathological change or the traumatic alteration of organs or members have occasioned a difference in the line of action Tissues altered by disease offer a different resistance to the invasion of wound accidents than tissues whose vitality has been interfered with by injury The removal of an ovarian tumor is a different kind of surgery from that which effects the removal of a crushed limb In the one the tissues immediately concerned and the system at large have been prepared by a slow but constant alteration for the invasion of the surgeon's knife, their power of resistance has been increased The healthy limb, suddenly crushed with its normal power of absorption and its normal nerve supply, which transmits the sudden insult and the unexpected injury with the rapidity of thought to the central nervous system presents a more dangerous field for the exercise of the surgical art

Afternoon Session

The afternoon session was held at the City Hospital, and consisted of demonstrations of surgical cases by local surgeons Cases illustrating conservative surgery, were presented by Drs W B Outten and W A McCandless

Dr McCandless also demonstrated a simplified method of applying plaster-of-paris jackets, adapted to the cases of injury to the spine in railway accidents, or when the usual apparatus for extension is not at hand A piece of toweling, or any strong cloth, is stretched between two firm bodies, a few feet from the ground Upon this the patient is laid face downward, the long way of the cloth, and extension is secured by his pulling upon the edge of cloth above his head A plaster bandage is now applied around the body, taking in cloth and all, the cloth above and below the bandage is cut away, and the patient is ready for removal

An interesting case of a man injured by a train three years ago, was presented by Dr H H Mudd Six months after the accident a tumor developed on the right side of the body, inside of the eleventh rib, and three inches from the vertebral column One year later the abscess discharged, leaving a sinus An operation for supposed necrosis of the rib opened up the sinus Probing developed the presence of a calcareous deposit, felt about four inches from external opening At the time of present operation, there was discharged through a drainage tube, a milky substance, found to be the contents of the intestinal canal A tube was inserted into the stomach, into which air was forced, and a lighted match at the end of the drainage tube was extinguished by the current of air—also colored fluid pouring into the stomach, was almost immediately discharged through the drainage tube, indicating that the sinus was connected with the stomach The operation consisted in an incision, four inches in length, from a point two inches from median line, downward and outward, parallel to lower costal margin A soft rubber catheter inserted into fistulous tract, from the external opening, was found to enter the duodenum at about the juncture of ascending and descending colon The hole in the intestine, large enough to admit two fingers, was closed by suture

Evening Session

Dr W B Outten read a paper "Injuries to Back Without Psychic Elements"

Dr L Bremer presented a paper on "Traumatic Neuroses in Court" (This paper will appear in The Journal)

Second Day—October 27

The second day's proceeding were devoted principally to surgical clinics at the Post-Graduate and Alexian Brothers Hospitals, and consisted of operation for removal of large lipomatous growths from the neck, by Dr H Tuholske, and a gastrostomy and a tracheotomy for stenosis of pharynx by Dr F J Lutz

The following papers were presented "Report of a Case of Abscess of the Brain," by Dr R L Johnston Rolla, Mo , 'Compression of the Brain," by Dr J E Teft of Springfield, Mo

Abstract to be furnished

Officers for the ensuing year were elected as follows President, Dr C A Smith of Tyler, Tex , First Vice President, Dr E A Neely of Memphis, Tenn , Second Vice-President, Dr W T Jameson of Palestine, Tex , Secretary, Dr J A Lightfoot, Texarkana, Ark Treasurer, Dr L H Callaway, Nevada Mo

Place of meeting, Memphis, Tenn

At a Business Meeting of the Philadelphia County Medical Society held Oct 18, 1893, the following resolutions offered by Dr S Solis Cohen and seconded by Dr R N Keely were unanimously adopted

WHEREAS, Dr James E Reeves of Chattanooga, having denounced the so called 'Amick Cure" for consumption as a quack nostrum, and stated that its proprietor was not a physician in good and regular standing, was accused of criminal libel, and

WHEREAS, The grand jury has ignored the indictment brought against him, be it

Resolved, That the Philadelphia County Medical Society congratulates Dr Reeves on his bravery, a bravery unfortunately too rare at the present day, and tenders him sympathy in the persecution to which he has been subjected,

Resolved, That no person who makes, deals in, or advertises as a cure a quack nostrum, that is to say a preparation the composition of which is kept secret, can be termed a physician in good and regular standing, because such action is *ipso facto* sufficient to work forfeiture of membership in this or any other county medical society governed by the laws of the American Medical Association

Resolved, That a copy of these resolutions, duly attested with the signatures of the President and Secretary and with the seal of the Society be forwarded to Dr Reeves, and that they be handed to the press for publication

Signed DE FOREST WILLARD President
Signed T B SCHNEIDEMAN, Sec'y

Southern Surgical and Gynecological Association —Sixth annual meeting will be held in New Orleans, La, Nov 14 15 and 16, 1893 The program, which we have in type, we are compelled to omit this week It will appear in our next issue

The Idaho State Medical Society was organized at Boise, September 13, with the following officers, viz President, Dr W W Watkins Moscow, Vice President, Dr I H Moore, Pocatella, Secretary, Dr C L Sweet, Boise

The Next Meeting of the Fox River Valley Medical Association, will be held in Aurora, Tuesday, Nov 7, 1893 Excellent papers will be presented on modern therapeutics Election of officers and other important business

H L PRATT, Sec'y, Elgin, Ill, Oct 14, 1893

Iowa and Illinois Central District Medical Association —The regular quarterly meeting of the Iowa and Illinois Central District Medical Association was held at Rock Island, Ill, Tuesday afternoon, Oct 31, 1893 A paper by Dr E S Bowman, "Prevention of Tuberculosis," was read and discussed

G L EYSTER, Sec'y

Suffolk District (Mass) Medical Society —At the first regular meeting of the season of the section for clinical medicine, pathology and hygiene of the Suffolk District Medical Society, held at the medical library, 19 Boylston Place, October 18, papers were read by Dr George M Garland on "Malignant Endocarditis" and Dr G Liebmann on "A Case of Dysphagia and Dilatation of the Esophagus" The report of the committee appointed by this section to secure from the Legislature improved sanitary legislation was received from the Chairman, Dr David W Cheever

The Hartford County (Conn) Medical Association held its 101st semi-annual meeting at the Y M C A Hall at New Britain, October 26 Dr A G Cook of this city, read a paper upon "Fixture in the Treatment of Fractures Into Joints," and Dr M M Johnson delivered an essay upon "Surgical Diseases of the Kidneys" Dr Henry Douttell of New Britain gave an essay upon the influence of the great industrial establishments on the people from a sanitary standpoint, and Dr E P Swasey of New Britain spoke upon gun-shot wounds of the subclavian artery and vein

The St Lawrence Co, N Y, Medical Society held its semi-annual meeting at Ogdensburg October 17 Addresses were delivered by Vice-President Dr F F Drury, Dr E H Bridges, Dr J M Mosher, Dr R H Hutchins and Dr H S Stilwell, Ogdensburg, Dr John O Rose, Rochester, Dr S W Close, Gouverneur, and Dr M E Smith, Colton

The Northwestern Medical and Surgical Society of New York held a meeting at the invitation of Dr R C Cole at the Marlborough Hotel, October 18 Dr S W Leo presided Dr William Stevens read a technical paper on the subject, "When death results from ether, administered as an anesthetic, is it due to idiosyncrasy or pathological conditions?" Dr Stevens referred to the sudden death of Colonel Elliott F Shepard last spring as a remarkable case He said he had never seen a death from ether in his seventeen years' experience

Reading Medical Association —The Reading Medical Association held a special meeting October 24 Drs Howard S Reeser, C W Bachman, and Horace E Schlemm were appointed a committee to secure physicians to act on the dispensary staff of the new Reading hospital dispensary, which has recently been opened on Court Street below Sixth

CORRESPONDENCE

The First Professional Organization

CAMDEN, N J, Oct 23, 1893

To the Editor —In the issue of October 21, there appeared an article credited to the *Norwich* (Conn) *Bulletin*, on "The First Professional Organization," which states "that the first step toward professional organization and protection in Connecticut was taken by Norwich physicians," who met on March 24, 1774, pursuant to an advertisement of March 3, to consider and prefer a memorial to the General Assembly to regulate the practice of physic It is stated that "their demand was for the appointment of a committee legally authorized to examine and approve candidates, if found qualified," and that "the movement, which was in advance of the age, was negatived in the Lower House" It is also claimed that this was "the initiative step in a series of efforts which have since resulted in the permanent establishment of flourishing State and National Associations, which separate the qualified physician from the 'ignorant pretender'"

This is an interesting historical statement and, so far as it relates to Connecticut, is undoubtedly true But it is by no means the initiative step or the earliest effort in the Colonies to organize the profession, or to regulate the practice of medicine On June 27, 1766, eight years before the Connecticut rally, the following advertisement appeared in the *New York Mercury*

"A considerable number of the Practitioners of Physic and Surgery, in East New Jersey, having agreed to form a Society for their mutual improvement, the advancement of the profession and promotion of the public good and desirous of extending as much as possible the usefulness of their scheme, and of cultivating the utmost harmony and friendship with their brethren, hereby request and invite every gentleman of the profession in the province, that may approve of their design, to attend their first meeting, which will be held at Mr Duff's, in the city of New Brunswick, on Wednesday, the 23d of July, at which time and place the Constitution and Regulations of the Society are to be settled and subscribed

"East New Jersey, June 27th, 1766"

On the day appointed, July 23, 1766, a large body of physicians met at New Brunswick, formed themselves into a Society to be known as the New Jersey Medical Society, adopted instruments of association and a constitution, and elected a president, secretary and treasurer Regular meetings were held twice a year the records of which are in possession of the Society

In 1771, the Society petitioned the Assembly for an act regulating the practice of medicine, and on Sept 26, 1772, the act was passed This act required an examination in physics and surgery, approved of, and admitted by any two judges of the Supreme Court, taking to their assistance for the examination such proper persons as they should deem fit, and the Court gave a certificate of examination, without which any one (except those licensed by the crown or physicians from other Colonies) practicing in the Colony was liable to a fine It also legalized physicians' fees

In 1774, an effort was made by the Society to procure a charter, which was delayed by the Revolution, but granted by the State in 1790 There was an intermission of the regular meetings of the Society from 1775 to 1781, because the local situation of the war rendered it dangerous for members to travel through the Colony and because, also, many of the members took an active part in the Revolution As soon, however, as civil government was restored, the Society convened Nov 6, 1781, at Princeton The complete records of the Society have been preserved since its organization in 1766, and the Medical Society of New Jersey claims to be the oldest State Medical Society in the United States, and among the first to secure an act from its Colonial Assembly to legalize and regulate the practice of medicine The first State law regulating medical practice in New Jersey was passed in 1783 Very respectfully,

E L B GODFREY, M D

Cheap Colleges

SPOKANE, WASH , Sept 26, 1893

To the Editor —My article published in THE JOURNAL of the 23d inst, was not intended as an advertisement of my qualifications, which I am proud to say are as good as can be obtained in the United States, but to call your attention to the false position you are putting our really good colleges by constantly advertising inferior ones Until within the last two years the German universities would recognize tickets for time spent in some of our best schools, but now they refuse to so recognize time spent in any of them They say they can not distinguish between the good and the poor schools, we have so many of them And it seems natural that they should not when THE JOURNAL will not

I hope to see the day when a "Yankee" M D degree will rank with any obtained in Europe and it seems to me that one of the first steps toward attaining that end will be for THE JOURNAL to refuse to recognize in any way, any but our very best colleges and universities We have in the United States, about one hundred and forty colleges and universities granting the degree of M D , probably forty of those have such facilities for teaching medicine as ought to entitle them to recognition anywhere The others are run for revenue only, or to advertise the faculty connected with them or both and they should be ignored by the AMERICAN MEDICAL ASSOCIATION and its JOURNAL, or if noticed at all only to call attention to the fact that they are a disgrace to the profession, and that their course does not meet with the approval of the better element of the profession here

Yours, D C NEWMAN

As this letter related to the business management of THE JOURNAL, and involved a censorship of the colleges, it was handed to one of the Trustees to look over, that officer did not return it immediately, and the matter rested in his hands, and was not returned until the receipt of the following letter when its return was called for by the editor

The elevation of the city of Spokane above the sea level makes ebullition easy, and our friend seemed to grow excited He writes

SPOKANE, WASH , Oct 25, 1893

Dear Sir —In my article published in our JOURNAL of the 23d of September, you chose to slur me by a head line that newspaper men would count as entirely uncalled for and poor taste I replied at once, but you continue your unprofessional tactics by refusing to publish the reply You attempt to deceive me by not noticing it among Letters Received, but as the letter has not returned to me, of course you received it I readily see that to publish such letters as mine would be bad politics, as many of the professors of these second and third class colleges and diploma mills have a voice in the AMERICAN MEDICAL ASSOCIATION, and are often elected to vice-presidencies, and as you are evidently in sympathy with these people and running THE JOURNAL for Dr Hamilton, nothing else can be expected of you So I inclose stamp for return of the manuscript

Yours very truly,

D C NEWMAN

American Women are Physically Degenerating

WASHINGTON, D C , October, 1893

To the Editor —In THE JOURNAL of October 21, Dr Edmund Andrews of Chicago, takes up the article of Dr Cyrus Edson on deterioration of American women, published in the October number of the *North American Review*, and gives us the the more cheerful if not the exact status of American motherhood

With Dr Andrews the wish is evidently father to the thought, for if we examine the facts as they are presented to us in everyday life, we find there is almost a unanimity of opinion among physicians, nurses and mothers of grown children, that women of the last two decades of years seem to suffer more, become sooner physically exhausted and are slower rallying from childbirth than their mothers before them

Taking haphazard the names of some of those married within the last ten years, of my acquaintance, one can not but see a picture of suffering and invalidism, which leaves but little doubt that the present modus vivendi of lovely women is radically wrong Is the wrong wrought "in the schools, where by ambition and by rewards for success and disgrace for failure, growing girls are goaded to a disastrous amount of mental strain and over brain work," or must we go farther back, to the mothers of our present wives and blossoming maidens, when frequent and multitudinous child bearing was more common, and the style of tight lacing and high heels was in vogue, mothers then bringing into the world offspring whose uterine life was spent in a sub involuted tissue and whose narrow confines were restricted and hampered

Of the names of forty-eight mothers, some primiparæ, others multiparæ, all married within ten years, I find there are but twenty who may be said to enjoy as good health as before they were married Of the remaining twenty eight, seven died, incident to or following childbirth, five are bedridden, and the remaining sixteen have never regained their former good looks and health

Our American women are pretty, as proportionately and beautifully formed as ever They have the courage and will to carry them through long suffering, but too often the reserve physical force soon gives out even with little exertion, and leaves us to terminate a protracted labor as best we can JAMES D MORGAN, M D

Ohio Epileptic Asylum

The following communication has been received, addressed "To the State and county officers and the public "

I am advised by the Board of Trustees of the Ohio Hospital for Epileptics, that they are about ready to open for the admission of 250 male patients, but are not yet provided with the proper information to enable them to enumerate and classify the applicants for admission

The probate court of each county has proper blank forms for application, and it is earnestly desired that all who seek the care of this institution shall call upon the probate judge and fill out these blanks and forward to Dr H C Rutter, Manager, Gallipolis, O , at once Very truly,

W McKINLEY, JR , Governor

Is It a Swindle?

TOLEDO, OHIO, Oct 28 1893

To the Editor —Some months ago a lady representing herself as the granddaughter of Dr McDowell, canvassed this and neighboring cities, taking orders for the "Biography of

McDowell" She represented that she needed the money, and most of those who subscribed paid cash She must have received over fifty orders here, and several hundred each in Detroit and Cleveland, nearly all paying cash We can not get any clue to her location nor can we get the books The publisher says that the edition is exhausted and not paid for and of course will print no more

Considering the *possible* magnitude of the swindle, I write to ascertain how to check it If you desire it, can get the statements of those who paid in this city

Yours truly,
Thomas Hubbard,
Secretary, Ohio State Medical Society

Objects to the Term "Jackass"

Detroit, Mich , Oct 25, 1893

To the Editor —The scientific language used in the argument by Dr Solomon Solis-Cohen against Dr John B Roberts and his article, "The Similarity between Physicians and Homeopaths," is worthy of remark His article is illiberal, un-American, and based upon an unscientific principle of thought A principle of science that has been accepted by all *civilization is true, but a principle of science which* has not reached its perfection and its acceptance by the whole civilized world is not true, as yet The paper, as a whole, was more suitable for a political gathering than a scientific society No matter what ideas a man may have, he is never to be compared to a mule or a jackass It is ungentlemanly to speak thus of a class of excellent men who are entitled to the respect of those who can not agree with them

Louis Edelman, M D

Proposed Change of Name

Chattanooga, Tenn , Oct 24, 1893

To the Editor —Apropos of your editorial, "Try a New Name,' I would state that the Tri-State Medical Society of Alabama, Georgia and Tennessee will at its next meeting vote on a proposition to change the name to the Southeastern Medical Society The next meeting will be held in Atlanta on the second Tuesday in October, 1894

Fraternally,
Frank Trester Smith, Sec'y

MISCELLANY

Pittston, Pa New Hospital —A fine Cottage Hospital 88 x 44 feet, was opened October 24, at Pittston, Pa

The College of Physicians and Surgeons of Richmond, Va , have purchased the Richmond City Hospital for $18,489 39

Lowell, Mass , Hospital —A nine thousand dollar addition is to be built to the Lowell, Mass , Hospital

Robbed a Hospital —A patient at the Louisville *City Hospital*, robbed the hospital October 19, of all the surgical instruments he could conveniently carry away The thief was caught and most of the instruments recovered

Rich Legacies for Hospitals —The New York Hospital and the Presbyterian Hospital are among the residuary legatees of an estate, the proceeds of which, it is estimated, will yield $200,000 to each of these charities

Reichenau Consumptive Hospital —Baron Nathaniel Rothschild's plan of presenting the consumptives of Vienna with a castle at Reichenau has aroused great opposition in that neighborhood, which is a delightful summer resort The landlords and others *fear that the* presence of so many sick people will drive away the guests who come there for pleasure But the chief objection comes from the *Emperor's* brother, the Archduke Charles Louis, who quarrelled with the Baron some time ago because he declined to sell the castle to the Duke When *the money prince* found that the Duke had set his heart on getting possession of the castle he straightway decided to convert it into a hospital

New Hospital at Rhinelander, Wis —The Sisters of Charity at Rhinelander, Wis , are to have a new hospital building that will cost $20,000

A Dispensary Burned —The dispensary of the New York Presbyterian Hospital was destroyed by fire October 21

Change of Address —Dr Bayard Holmes to *104 East Fortieth* Street, Chicago

Want a Bacteriologist —The Board of Health of Syracuse, N Y , have asked the city council for the appointment of a bacteriologist to verify diagnoses of diphtheria

Private Fire Service in a Hospital —*A destructive hospital* fire was probably prevented by a private apparatus, at the New York Presbyterian Dispensary The conflagration was started early on a Sunday morning, in an underground apartment where turpentine and other combustibles were stored The private fire apparatus was put in operation in a few minutes The city fire engines came soon afterwards and with several streams of water pouring into the blazing storeroom, all danger from a spread of the flames was over*past in less than twenty minutes* The total loss on drugs and furniture in dispensary and drug room is estimated at $3,000 With a less degree of preparation, and a few minutes longer delay in handling the fire, the loss might readily have been quadrupled A good private fire service in hospitals or asylums is a "modern improvement" that can not be *overlooked or slighted*

Ohio Railway Surgeons —At the meeting of the Ohio Railway Surgeons the following officers were elected for 1894 President, W A Ward of Gonneaut, Vice-President, B M Ricketts, Cincinnati, Second Vice President, W S Hay, Wellston Chas H Mertz, Toledo, Secretary

New York Quarantine Commission —The Board of Quarantine Commissioners met in the Mayor's office October 18, and awarded to Colin McLean additional contracts for the improvement of buildings on Swinburne and Hoffman Islands, to the amount of $21,099 It also allowed Dr Jenkins, $9,281 to pay bills contracted during the cholera scare of last year.

Tri-State Medical Journal —Dr James Moores Ball of Keokuk, Iowa, is to be the Editor-in chief of a new medical journal, to be called the *Tri-State Medical Journal* The initial number will appear December 1, and reappear each month thereafter

The Medical Mirror and the Congress —The St Louis *Medical Mirror* devotes the entire October number to the proceedings of the Pan-American Medical Congress Among its other features of interest is a *stenographic report of the* speeches at the editors' banquet

A Group of Connecticut Triplets —A thirteen-year old matron of Roxbury has given birth to triplets—one boy and *two girls*—weighing in all twenty-three pounds The age of the father is sixteen years The mother is robust and developed beyond the average of girls of her age She is the daughter of a farmer and her husband is a farm-hand

A Venerable Pioneer Physician —Dr Frederick Andros, of Mitchell, S D , claims to be the first authorized practitioner of medicine not only in Dubuque, Iowa, but also in the immense region west of the Mississippi River to the Pacific north of the Missouri River He is a native of Massachusetts and now nearly 91 years of age

Sick Men as Bank Assets —The Metropolitan National Bank of Kansas City, recently sued Mr Frank E Tyler of that city and attached his property It seems that he was President of the Church Charity Association which established All Saints Hospital and had advanced that institution some $14,707 73, which on demand of the bank, the hospital was unable to pay The bank therefore has come into possession of the hospital full of sick, some trained nurses, and the apothecary shop

Left a Baby for the Doctor, and a Nursing Bottle —An elderly woman rang Dr S H Blodgett's (Homeop) doorbell at No 88 Main St , Cambridge, and without heeding the servant's statement that the doctor and his wife were at the World's Fair, she walked into the office, and leaving a three weeks-old infant on the floor, walked out again The woman then went to a drug store near by and left an order to have a nursing bottle sent to Dr Blodgett's house, after which she disappeared

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Dr Porter has spent most of his life in St Louis He was graduated from the St Louis Medical College in 1885, returned to it as assistant professor of physiology in 1887 and became full professor in 1888

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The coroner held an inquest of which the following is the press report

"The jury was composed of Adam Klink, Maurice Nelligan, Henry Bruns, John Conroy, Charles F Bronners, Ludwig Trage, jr , William Hammerle, Edwin Collins, William Schillinger and John Gebhardt.

' Some very impertinent questions were asked during the course of the examination Juryman William Shillinger being especially pointed in his inquiries The question of carelessness hinged upon whether or not Dr Harding was responsible for the sponge coming off the wire while he was clearing out the patient's throat Dr D M Totman, who conducted the Kanaley operation, and all who were present at that operation say that no blame can be attached to Dr Harding He is a thoroughly capable physician and was attending strictly to his business when the accident occurred However the jury seemed to think that the sponge was either rotten or insecurely fastened to the wire forceps, and they rather blame Dr Harding for this carelessness The verdict in full was

" 'We find that Patrick Kanaley of Jordan, N Y , came to his death while undergoing an operation at St Joseph's Hospital, accidentally by respiration swallowing a sponge necessarily used at the time by an attendant While we do not desire to censure the authorities of St Joseph's Hospital we do call attention to the careless manner in which an assistant physician performed his specified duty ' "

"Those examined on the stand were Dr D M Totman, Dr J H Goff of Cazenovia, who was present at the operation, Dr E V Crane, senior house physician of St Joseph's Hospital, where the operation was performed, Dr Harding and Charles Coville, a medical student

"The doctors who conducted the operation have concluded that Kanaley must have first swallowed the sponge and then in vomiting raised it so that it passed into his windpipe "

THE PUBLIC SERVICES

Army Medical School —In accordance with orders from the War Department published in The Journal of July 8 last the session of the Army Medical School will open at the Army Medical Museum, Washington D C on Wednesday, November 1 The daily order of duties will be as follows 9 A M to 12 M , pathological laboratory 1 P M to 2 30 P M chemical laboratory, 3 P M to 4 P M lecture in assembly room

On Mondays, Wednesdays and Fridays from 11 30 A M to 12 M during November at the Museum Building and on Saturdays from 9 30 to 10 30 A M at the Hospital Corps School, Washington Barracks D C practical instruction will be given in litter and ambulance drill and in first aid

The lecture course will embrace the following subjects Duties of Medical Officers by Assistant Surgeon General Alden on Wednesdays, throughout the session, from 3 to 4 P M Military Surgery care of wounded in time of war, and hospital administration by Deputy Surgeon General Forwood on Thursdays throughout the session from 3 to 4 P M Military Hygiene, by Surgeon Billings on Fridays throughout the session from 3 to 4 P M Military Medicine by Surgeon Smart on Mondays throughout the session from 3 to 4 P M It is expected that some of the lectures on military medicine and also lectures on bacteriology will be given by the Surgeon General The lecture hour from 3 to 4 P M on Tuesdays will be reserved for certain auxiliary courses the dates of which have not as yet been announced These will be of great interest and value to the young officers of the Medical Department Military law will be the subject of one of these courses to be given by Major George B Davis, Judge Advocate, U S Army Major Davis was formerly assistant professor of military law at the U S Military Academy, West Point, N Y and is the author of a highly valued work on International Law For some time past he has been Chairman of the Board of Publication of the Official Records of the War of the Rebellion A knowledge of military law and its procedures must be acquired by Army medical officers as they are subject to assignment for court martial duty The students of the Army Medical School are therefore to be congratulated on having Major Davis as their instructor on this subject Dr Robert Fletcher, whose long experience as a teacher of medical jurisprudence in the Columbian University of Washington D C , will give value to his course is expected to lecture on this subject, probably in February Dr Fletcher's name is well known in medical literary circles by his connection with the editorship of the *Index Medicus* Prof C W Stiles of the Department of Agriculture, has kindly consented to lecture on human parasites, and Capt J C Merrill of the Medical Department of the Army, will complete the course by an outline of comparative anatomy, giving special attention to points connected with the anatomy of the horse, and introducing to the members of his class those venomous reptiles and insects that they will probably meet in the course of their future service in the West

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from October 21, 1893 to October 27 1893

Lieut Col Albert Hartsuff, Deputy Surgeon General, is relieved from duty at Ft Omaha Neb and ordered to report in person to the commanding General Department of California, for duty as Medical Director of that Department to relieve Col Joseph R Smith Asst Surgeon General Col Smith, on being relieved by Lieut Col Hartsuff, will proceed to Governor's Island N Y , and report in person on December 4 to the Commanding General Department of the East for duty as Medical Director of that Department

Dr Benjamin H Kidder, Medical Inspector U S N has received his promotion to Medical Director

Marine Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the five weeks ended October 21 1893

Surgeon C D Fessenden, granted leave of absence for thirty days Oct 4, 1893

Surgeon P H Bailhachf detailed as delegate to meeting of American Public Health Association Oct 5 1893

Surgeon John Vansant granted leave of absence for thirty days, Sept 23 1883

Surgeon H H Hutton detailed as chairman of board to inspect Gulf Quarantine Station Oct 17, 1893

Surgeon J B Hamilton, granted leave of absence for three days, Oct 2 1893

Surgeon J M Gassaway detailed as member of board to inspect Gulf Quarantine Station Oct 17 1893

Surgeon F W Mead to rejoin station (Washington, D C), Sept 19 1893

Surgeon H R Capter, to proceed to Way Cross Ga , for temporary duty, Oct 4, 1893

P A Surgeon P C Kailoch, granted leave of absence for twenty days, Oct 9, 1893

P A Surgeon S D Brooks, to proceed to Chicago, Ill for temporary duty, Sept 19 1893

P A Surgeon H T Goodwin, granted leave of absence for thirty days, Sept 27, 1893

P A Surgeon J O Cobb granted leave of absence for thirty days, Oct. 11 1893

P A Surgeon G M Guitfras detailed as recorder of board to inspect Gulf Quarantine Station Oct 17 1893

P A Surgeon C P Wertenbaker, granted leave of absence for seven days Sept 26, 1893

P A Surgeon J C Perry, granted leave of absence for seven days, Oct 5, 1893

Asst Surgeon C H Gardner to proceed to Port Townsend, Wash , for temporary duty, Oct 7, 1893

Asst Surgeon J A Nydegger to proceed to Way Cross, Ga , for temporary duty Oct 8 1893

Asst Surgeon Seaton Norman, granted leave of absence for four days, Oct 4, 1893

Asst Surgeon L K Sprague granted leave of absence for three days, Oct 7 1893

LETTERS RECEIVED

(**A**) Ayer N W & Son Philadelphia Pa Atkinson, W B , Philadelphia Pa (**B**) Baldwin J G , Philadelphia, Pa Brayton P B Syracuse N Y Bernd, Henry & Co , St Louis Mo Brainard, Nellie U Osage, Iowa Baker H B , Lansing, Mich Bates and Morse Adv Agency New York, N Y Bachmann, C F Jr Allegheny, Pa , Brush, E F Mt Union N Y Ball James M Keokuk Iowa, (**C**) Conkling, G , Glen Falls N Y Clark, E S San Francisco Cal Cincinnati Sanitarium, College Hill, Ohio Coates Truman Russelville Pa (**D**) Dobson, H L Ashland, Me Drevet M'f g Co New York N Y , Davis R C Ann Arbor, Mich (**E**) Ely J S Barnesville, Ohio (**F**) Freidenwald, A , Baltimore, Md Fehr Julius Hoboken N J , (**G**) Goelet Augustin H , New York N Y Guild W H & Co , Boston Mass Goss J H Athens Ga (**H**) Hummel & Parmele Philadelphia Pa Heath W P St. Louis Mo (**I**) Ingals E F Chicago Ill (**J**) Jeffery A F Denver, Col (**L**) Lea Brothers & Co Philadelphia Pa Le Mond, Robt F Denver, Col (**M**) Mullen A J St Louis Mo Martin F H Chicago, Ill , Morrison Plummer & Co Chicago Ill Montizambert F , Quebec Canada (**P**) Parsons F S , Landower Pa Parker, Richmond, Va (**R**) Roedel H H Lebanon, Pa Rogers S F Troy N Y Rumbold, Thos F San Francisco Cal (**S**) Stokes W B Coldwater Ky Scherer Otto, Detroit Mich (**T**) Thompson, R L Spokane Wash Tuley, H E , Louisville Ky Topliff, C L New York N Y Trowbridge, L S Detroit Mich (**W**) Western News Co Chicago Ill Wright, John, Clinton Ill Warner, W R & Co Philadelphia, Pa Winslow, C F , Albuquerque N M

The Journal of the
American Medical Association

Vol XXI CHICAGO, NOVEMBER 11, 1893 No 20

ORIGINAL ARTICLES

REPORT OF THE COMMITTEE ON SCHOOL HYGIENE

Presented to the Section on State Medicine, at the Forty fourth Annual Meeting of the American Medical Association.

BY D F LINCOLN, M D
CHAIRMAN OF COMMITTEE GENEVA N Y

Upon the formation of the Committee it was thought best to divide the work among the members, assigning a separate department to each It has been found in practice, however, that the ground has not been fairly covered by this plan Long and careful special papers have been prepared and published by some of the members, while others, though deeply interested in the work, have not found time to treat their assigned subjects in a manner which would justify them in publishing results It has, therefore, seemed best to the Chairman of the Committee to take the responsibility of drawing up a brief but comprehensive statement of principles, covering all the topics, submitting the whole to each member, and presenting the matter to the Section of State Medicine

It seems desirable in doing this, to avoid statements which are open to reasonable doubt It is thought that the most useful result can be gained by a simple untechnical presentation of facts omitting discussions, statistics and arguments, with the object of securing the attention of school authorities, teachers, builders, and others interested in education

A—SITE, DRAINAGE AND SEWERAGE OF SCHOOL BUILDINGS

1 *Good Light* —This point has been seriously neglected in many city sites, for financial reasons The neglect to secure good light has been demonstrated to be an important cause of near-sight in scholars The desired object can be attained by reserving a tolerably wide strip of land around the school building at the outset, and by municipal regulations restricting the height of neighboring structures It is suggested that the height of such buildings around schoolhouses should not exceed one-half the distance between them and the schoolhouse, or, that the line drawn from the foot of the school house wall to the upper part of the other house should not form an angle with the horizon exceeding 30 degrees In small towns the space for play grounds should be much greater—at least a half acre

2 *Sunlight* —If possible, the sun should enter every room in the house at some time in the day, but chiefly out of school hours The play grounds should be placed, if it can be so arranged, on the sunny side of the house There should be no trees overshadowing the house, since this causes dampness

3 *Neighborhood* —Disturbing influences, as the presence of large bodies of working people, railroads, noisy streets, engine houses, are injurious for various reasons, partly as furnishing undesirable outside associations Immorality or filth should not be suggested in the surrounding neighborhood A main city street is commonly to be avoided The vicinity of offensive trades, as tanneries, rendering establishments, refineries and gas works, is to be avoided

4 *Soil* —A damp soil is of itself a serious objection to a site The case is worse if the site be low, with poor natural drainage and poor opportunity for artificial relief If it be necessary to build on a springy piece of ground, a trench must be dug around the foundation to a depth below the cellar floor, and far enough from the building to insure the safety of the walls, in this, drain tile with loose joints is laid, discharging away from the building at some lower point It is useless to cement the cellar wall or floor for the purpose of excluding water, but cement or asphalt forms a good protection against dampness

School yards in towns should be so paved (not graveled), and underdrained if necessary, as to become dry within an hour after a rain Dry walks should lead to the out-buildings

5 *Out-buildings* —If privies are employed, they should never be within fifty feet of the main building They should be separate for the sexes, with entirely separate paths of access, and having a board fence between Dry earth or sifted ashes should be sprinkled over the contents once a day The entire contents should be removed once a fortnight The receptacle must be so constructed that such removal can be effected easily and completely, or it should itself be removable with its contents An iron trough on wheels, or a metal pail is suggested

Urinals must not be made of iron, and they had better not be made of any metal Impervious material, such as glass or oiled slate, is best Cement is very objectionable from its porosity Joints between slabs should be perfectly tight

6 *Water-closets*—When a supply of water is at hand, water closets are the best arrangement They may either be single, or may consist of long troughs corresponding to a number of seats The pan closet is undesirable, since its inner parts are not freely cleansed by the flow of water Of the simpler forms of closet, all those which do not furnish a quick and free discharge of water, cleansing the bowl thoroughly and removing all the contents within a few seconds, are to be absolutely rejected A noisy apparatus is exceedingly objectionable for closets which are placed (e g for teachers' use) in the vicinity of schoolrooms, the noise may proceed either from the tank or the basin

One of the simplest forms of apparatus for schools is the long tank of cement or iron placed under the into possession of the hospital full of sick, some trained nurses, and the apothecary shop

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Army Medical School —In accordance with orders from the War Department published in The Journal of July 8 last, the session of the Army Medical School will open at the Army Medical Museum, Washington D C on Wednesday, November 1 The daily order of duties will be as follows 9 a m to 12 m , pathological laboratory, 1 p m to 2 30 p m chemical laboratory 3 p m to 4 p m , lecture in assembly room

On Mondays, Wednesdays and Fridays from 11 30 a m to 12 m during November, at the Museum Building and on Saturdays from 9 30 to 10 30 a m at the Hospital Corps School, Washington Barracks D C practical instruction will be given in litter and ambulance drill and in first aid

The lecture course will embrace the following subjects Duties of Medical Officers by Assistant Surgeon General Alden on Wednesdays, throughout the session, from 3 to 4 p m Military Surgery care of wounded in time of war, and hospital administration, by Deputy Surgeon General Forwood, on Thursdays throughout the session, from 3 to 4 p m Military Hygiene, by Surgeon Billings on Fridays throughout the session from 3 to 4 p m Military Medicine by Surgeon Smart, on Mondays throughout thd session from 3 to 4 p m It is expected that some of the lectures on military medicine and also lectures on bacteriology will be given by the Surgeon General The lecture hour from 3 to 4 p m on Tuesdays will be reserved for certain auxiliary courses the dates of which have not as yet been announced These will be of great interest and value to the young officers of the Medical Department Military law will be the subject of one of these courses to be given by Major George B Davis Judge Advocate, U S Army Major Davis was formerly assistant professor of military law at the U S Military Academy, West Point, N Y , and is the author of a highly valued work on International Law For some time past he has been Chairman of the Board of Publication of the Official Records of the War of the Rebellion A knowledge of military law and its procedures must be acquired by Army medical officers as they are subject to assignment for court martial duty The students of the Army Medical School are therefore to be congratulated on having Major Davis as their instructor on this subject Dr Robert Fletcher, whose long experience as a teacher of medical jurisprudence in the Columbian University of Washington D C , will give value to his course, is expected to lecture on this subject probably in February Dr Fletcher s name is well known in medical literary circles by his connection with the editorship of the *Index Medicus* Prof C W Stiles of the Department of Agriculture, has kindly consented to lecture on human parasites, and Capt J C Merrill of the Medical Department of the Army, will complete the course by an outline of comparative anatomy, giving special attention to points connected with the anatomy of the horse, and introducing to the members of his class those venomous reptiles and insects that they will probably meet in the course of their future service in the West

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from October 21, 1893 to October 27 1893

Lieut Col Albert Hartsuff, Deputy Surgeon General, is relieved from duty at Ft Omaha Neb , and ordered to report in person to the commanding General Department of California for duty as Medical Director of that Department to relieve Col Joseph R Smith Asst Surgeon General Col Smith, on being relieved by Lieut Col Hartsuff, will proceed to Governor s Island N Y , and report in person on December 4 to the Commanding General Department of the East for duty as Medical Director of that Department

Dr Benjamin H Kidder, Medical Inspector U S N has received his promotion to Medical Director

Marine Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the five weeks ended October 21 1893

Surgeon C D Fessenden, granted leave of absence for thirty days Oct 4 1893

Surgeon P H Bailhache, detailed as delegate to meeting of American Public Health Association, Oct 5 1893

Surgeon John Vansant, granted leave of absence for thirty days, Sept 23, 1883

Surgeon H H Hutton detailed as chairman of board to inspect Gulf Quarantine Station, Oct 17, 1893

Surgeon J B Hamilton, granted leave of absence for three days, Oct 2 1893

Surgeon J M Gassaway detailed as member of board to inspect Gulf Quarantine Station Oct 17 1893

Surgeon F W Mead to rejoin station (Washington, D C), Sept 19 1893

Surgeon H R Carter, to proceed to Way Cross Ga , for temporary duty, Oct 4, 1893

P A Surgeon P C Kalloch granted leave of absence for twenty days, Oct 9 1893

P A Surgeon S D. Brooks, to proceed to Chicago, Ill for temporary duty Sept 19 1893

P A Surgeon H T Goodwin, granted leave of absence for thirty days, Sept 27, 1893

P A Surgeon J O Cobb granted leave of absence for thirty days, Oct. 11 1893

P A Surgeon G M Guiteras detailed as recorder of board to inspect Gulf Quarantine Station Oct 17 1893

P A Surgeon C P Wertenbaker, granted leave of absence for seven days Sept 26 1893

P A Surgeon J C Perry, granted leave of absence for seven days, Oct 5 1893

Asst Surgeon C H Gardner to proceed to Port Townsend, Wash , for temporary duty, Oct 7 1893

Asst Surgeon J A Nydegger to proceed to Way Cross, Ga for temporary duty Oct 8 1893

Asst Surgeon Seaton Norman, granted leave of absence for four days, Oct 4, 1893

Asst Surgeon E K Sprague granted leave of absence for three days, Oct 7 1893

LETTERS RECEIVED

(**A**) Ayer N W & Son Philadelphia Pa Atkinson, W B , Philadelphia Pa (**B**) Baldwin J G , Philadelphia, Pa Brayton P B , Syracuse N Y , Bernd, Henry & Co St Louis Mo Brainard, Nellie U Osage, Iowa Baker, H B , Lansing, Mich Bates and Morse Adv Agency New York, N Y Bachmann C F Jr Allegheny Pa Brush, E F Mt Union N Y Ball James M Keokuk Iowa, (**C**) Conkling, G Glen Falls, N Y Clark, E S San Francisco Cal Cincinnati Sanitarium, College Hill Ohio Coates Truman Russelville Pa (**D**) Dobson, H L , Ashland, Me Drevet M f g Co , New York N Y Davis, R C Ann Arbor, Mich (**E**) Ely J S Barnesville Ohio (**F**) Freidenwald, A , Baltimore, Md Fehr Julius Hoboken N J , (**G**) Goelet Augustin H , New York N Y Guild W H & Co , Boston Mass Goss J H Athens, Ga (**H**) Hummel & Parmele Philadelphia Pa Heath W P St Louis Mo (**I**) Ingals E I Chicago Ill (**J**) Jeffery A F Denver Col (**L**) Lea Brothers & Co Philadelphia Pa Le Mond, Robt F Denver, Col (**M**) Mullen A J St Louis Mo Martin F H Chicago, Ill , Morrison, Plummer & Co Chicago Ill Montizambert F Quebec Canada (**P**) Parsons, F S , Landower Pa Parker, Richmond Va (**R**) Roedel H H , Lebanon, Pa Rogers S F Troy N Y Rumbold, Thos F , San Francisco Cal (**S**) Stokes W B Coldwater Ky Scherer Otto, Detroit Mich (**T**) Thompson, R L Spokane Wash Tuley H E, Louisville Ky Topliff C L New York N Y Trowbridge, L S Detroit Mich (**W**) Western News Co Chicago Ill Wright, John, Clinton Ill Warner, W R & Co Philadelphia, Pa Winslow C E, Albuquerque N M

The Journal of the
American Medical Association

Vol XXI CHICAGO, NOVEMBER 11, 1893 No 20

ORIGINAL ARTICLES

REPORT OF THE COMMITTEE ON SCHOOL HYGIENE

Presented to the Section on State Medicine, at the Forty fourth Annual Meeting of the American Medical Association.

BY D F LINCOLN, M D
CHAIRMAN OF COMMITTEE, GENEVA N Y

Upon the formation of the Committee it was thought best to divide the work among the members, assigning a separate department to each It has been found in practice, however, that the ground has not been fairly covered by this plan Long and careful special papers have been prepared and published by some of the members, while others, though deeply interested in the work, have not found time to treat their assigned subjects in a manner which would justify them in publishing results It has, therefore, seemed best to the Chairman of the Committee to take the responsibility of drawing up a brief but comprehensive statement of principles, covering all the topics, submitting the whole to each member, and presenting the matter to the Section of State Medicine

It seems desirable in doing this, to avoid statements which are open to reasonable doubt It is thought that the most useful result can be gained by a simple untechnical presentation of facts omitting discussions, statistics and arguments, with the object of securing the attention of school authorities, teachers, builders, and others interested in education

A—SITE, DRAINAGE AND SEWERAGE OF SCHOOL BUILDINGS

1 *Good Light*—This point has been seriously neglected in many city sites, for financial reasons The neglect to secure good light has been demonstrated to be an important cause of near-sight in scholars The desired object can be attained by reserving a tolerably wide strip of land around the school building at the outset, and by municipal regulations restricting the height of neighboring structures It is suggested that the height of such buildings around schoolhouses should not exceed one-half the distance between them and the schoolhouse, or, that the line drawn from the foot of the school house wall to the upper part of the other house should not form an angle with the horizon exceeding 30 degrees In small towns the space for play grounds should be much greater—at least a half acre

2 *Sunlight*—If possible, the sun should enter every room in the house at some time in the day, but chiefly out of school hours The play grounds should be placed, if it can be so arranged, on the sunny side of the house There should be no trees overshadowing the house, since this causes dampness

3 *Neighborhood*—Disturbing influences, as the presence of large bodies of working people, railroads, noisy streets, engine houses, are injurious for various reasons, partly as furnishing undesirable outside associations Immorality or filth should not be suggested in the surrounding neighborhood A main city street is commonly to be avoided The vicinity of offensive trades, as tanneries, rendering establishments, refineries and gas works, is to be avoided

4 *Soil*—A damp soil is of itself a serious objection to a site The case is worse if the site be low, with poor natural drainage and poor opportunity for artificial relief If it be necessary to build on a springy piece of ground, a trench must be dug around the foundation to a depth below the cellar floor, and far enough from the building to insure the safety of the walls, in this, drain tile with loose joints is laid, discharging away from the building at some lower point It is useless to cement the cellar wall or floor for the purpose of excluding water, but cement or asphalt forms a good protection against dampness

School yards in towns should be so paved (not graveled), and underdrained if necessary, as to become dry within an hour after a rain Dry walks should lead to the out-buildings

5 *Out-buildings*—If privies are employed, they should never be within fifty feet of the main building They should be separate for the sexes, with entirely separate paths of access, and having a board fence between Dry earth or sifted ashes should be sprinkled over the contents once a day The entire contents should be removed once a fortnight The receptacle must be so constructed that such removal can be effected easily and completely, or it should itself be removable with its contents An iron trough on wheels, or a metal pail is suggested

Urinals must not be made of iron, and they had better not be made of any metal Impervious material, such as glass or oiled slate, is best Cement is very objectionable from its porosity Joints between slabs should be perfectly tight

6 *Water-closets*—When a supply of water is at hand, water closets are the best arrangement They may either be single, or may consist of long troughs corresponding to a number of seats The pan closet is undesirable, since its inner parts are not freely cleansed by the flow of water Of the simpler forms of closet, all those which do not furnish a quick and free discharge of water, cleansing the bowl thoroughly and removing all the contents within a few seconds, are to be absolutely rejected A noisy apparatus is exceedingly objectionable for closets which are placed (e g for teachers' use) in the vicinity of schoolrooms, the noise may proceed either from the tank or the basin

One of the simplest forms of apparatus for schools is the long tank of cement or iron placed under the

one and the same problem, and that both should form a part of the original architectural design.

The amount of fresh air to be brought into the building for each pupil should be 2,000 cubic feet per hour for younger children (under 10) and 3,000 for high school pupils. These amounts are calculated from the assumptions that the external "pure" air contains an average of 4 parts of CO_2 in 10,000, and that when the CO_2 has increased under the influence of respiration, to the amount of more than 6 in 10,000, the air may be considered "impure." Dilution to the extent mentioned above, will keep the air of the room below the point of "impurity," here assumed. The purity required by this standard is such that persons coming fresh from out of doors will not perceive any distinct closeness in the air of the schoolroom.

As regards the relative requirements at different ages, it may be assumed as proportionate to the different amounts of CO_2 exhaled by people of different ages. In the case of children of 8 years, it is about two-thirds as much as in young persons of 15.

If a lower standard of supply is taken (say 1000–1500 c. f. per hour), there will be a perceptible deficiency of purity, which will have to be made up by an hourly opening of the windows on the occasion of recess.

If the cubic contents of a schoolroom equal 200 c. f. per head, the entire air contents of the room will thus be renewed every four to six minutes. It is found by experience that the draught caused by the in rushing air need not be troublesome in rooms which allow this amount of space per inmate. It is recommended that this be the average allowance of space.

In testing air for CO_2, it is important to take samples from the level of the pupils' heads, avoiding the admixture of the breath. If the condition of the air at that level is satisfactory, the end of ventilation has been gained.

The rapidity with which the air leaves the room may be ascertained by the use of the anemometer. In addition to this test it is desirable to apply the chemical test for comparing the discharged air with that of different parts of the room, for if the supply of fresh air is badly distributed, it may happen that in some parts of the room the currents are comparatively stagnant, and the air will grow more impure than the average of the room.

The animal impurities of the expired air (exclusive of CO_2) are probably, in part, of a poisonous nature. They, perhaps, include ptomaines as results of putrefactive decomposition. They are of infinitely more importance than the CO_2 which is associated with them, but they can not be conveniently made the subjects of quantitative test. Hence, the CO_2 test is employed, as indicating with *probability* how much the air has been affected by respiration.

The mere removal of foul air, whether by stoves, fireplaces, or ventilating flues, accomplishes but one-half of the duty of ventilation. The other half consists in supplying a quantity of fresh air equal in bulk to that removed. It often happens that no special provision is made for this supply, in this case the entering air is drawn from many sources—out of doors, the halls, the closets, the cellars, and indirectly from many undesirable places. Special ducts, therefore, are requisite for leading the pure outer air in large quantities to the schoolroom.

Such large quantities of air as are required can not be safely introduced without previous warming. But the rapidity with which the air is changed is so great that a high temperature is not required, as a rule, heating can be effectually performed with air not hotter than 100 degrees Fah. If the ventilation is sluggish, the air needs to be made correspondingly hotter in order to keep the room warm, but air thus over-heated is apt to have an odor which indicates that it has been in some way injured in the process.

The locality from which the air supply is drawn should of course be such as to avoid impurities—dust, smoke and bad smells.

A system of ventilation which is working well and sufficiently will produce a near equality of temperature in all parts of the room. The difference between the temperature at the floor level and that at five feet from the floor should not exceed 5 degrees.

A system is efficient in proportion as it maintains its activity under widely varying outside temperatures. Ventilation is needed at 40 degrees as much as at 0°, but it is much harder to keep up a sufficient action in the former case. If the system is based on the draught of heated flues, some additional means for increasing the heat of the flues ought to be available for such mild weather.

The relative humidity of air commonly breathed in our winter climate is low, compared with that in Western Europe. It becomes of necessity still lower when warmed. It is not, however, proved that the dryness thus obtained is generally prejudicial to health, either in schools or hospitals, although some individuals appear to require greater moisture. A part, if not the whole, of the unpleasant effect of breathing super-heated air is due to the bad ventilation, and the excessive temperature.

The thermometer placed at five feet from the floor should mark an average of 65 degrees to 70 degrees in our climate. This is considerably higher than is found desirable in Western Europe.

It is to be presumed that the entering air is warmer than that which leaves the room, since it contributes a fraction of its heat for the warming of the walls and windows. If introduced at the upper part of the room, it will therefore fall towards the floor by degrees as it becomes cooled. Hence a level near the floor is a natural one for its exit. The proportion of CO_2 at the upper level of the room is not essentially different, on the average, from that in the lower part, and the level of the orifice of extraction is a matter of indifference as regards that point. If it be our object to get rid of superfluous heat, we should discharge the air from the top, this, however, is not to be considered normal or regular, but only to be applied when heat is excessive, as (for instance) in evening schools with artificial light.

It is possible to apply the above principles to the ventilating of the smallest school house. A single room can be heated with an upright cylinder stove of ordinary construction, having around it an air space enclosed by a jacket of sheet iron. In the floor beneath the stove an opening is made, connecting with a flue led to the outer air, through which there will be a rapid and abundant inflow of pure warmed air. The supply flue may run in two directions, so as to be exposed to different winds, and each point of opening should be guarded with a valve. For the escape of foul air, openings near the floor are made in the brick chimney-flue, which should stand at the range of seats. The bottom is covered with a few inches of water, and slopes to an outlet so that by raising a plug the whole contents are quickly discharged into the sewer, after which cleansing is easily effected by a hose and broom. The addition of an automatic flushing apparatus acting spontaneously at fixed intervals has been found desirable.

All closets and urinals in a schoolhouse must have special ventilation by forced draught. No mechanical contrivances or disinfectors do away with the necessity of personal inspection and faithful cleansing by hand.

7. *Plumbing.*—The principles of drainage and sewerage, commonly termed the art of plumbing, are the same for school buildings as for other edifices. It may be stated, that pipes and other fixtures ought to be so placed that they can be *seen* by lifting movable boards, without having recourse to a carpenter, or mason, or plumber to disclose their intricacies.

It should further be understood, that the whole system is under the control and supervision of some responsible and intelligent person, who possesses sufficient plans and drawings of the system, and pays frequent attention to its condition.

B—CONSTRUCTION

1. *Safety.*—The chief danger is found in old buildings, and in those not originally intended for their present use. In such, we occasionally find conditions which are nearly sure to cause accidents in case of a panic. The staircase is the important point. It must be very strong, wide and easy; not steep, not sharp-angled, not spiral or with wedge shaped steps; it should have a platform at the turn. It is safer without a well; if balusters are used they must be high. In large buildings a staircase should be placed at each end. Halls and outer doors must be wide, and all doors open outward. Fire-escapes on the outside are at best an undesirable refuge, and in the ordinary forms may be very dangerous to a crowd of frightened children. Discipline and practice in "fire-drill" or quick orderly march from the school, are by far the best safeguards.

2. *The Schoolroom.*—The size of a class room should be governed by the number of pupils it is intended for. If we assume that 50 can be attended to by the teacher, and that 200 cubic feet of space is allowed per head, a room 24x33x12½ will answer well. The oblong shape is desirable. If the dimensions here given are exceeded in length, there will be difficulty on the teacher's part in supervision and on the scholars' part in seeing what the teacher may show or write on the board. A greater depth or distance from the windows than twenty-four feet will impair the lighting.

3. *Illumination.*—The lighting of a room for school work requires a much larger allowance of window space than is needed for dwellings. The windows must be square headed, and brought very near the ceiling; there must be no projections (cornices, piazzas, Italian shades) to interfere with the free entrance of light. The total amount of window glass on a liberal allowance may equal one-fifth the floor space; if fully exposed to the sky, less will suffice. Roller shades are of most use when the roller is placed at the foot of the window. Light coming wholly from one side (viz., the left hand) if sufficient in amount, is the best for the eyes; if this plan in any case appears likely to give insufficient lighting, owing to local conditions, windows may be added at the back, possibly also at the right (but in the latter case, at a very high level). Windows in front of the pupils are very injurious to the sight. The wall should be colored of a neutral tint, or with a faint shade of blue or green if liked. The ceiling should be white. It must have no cross beams placed transversely to the light. Blackboards must not be placed between windows.

4. *Miscellaneous.*—The size of recitation rooms must be planned upon the same principle as that of schoolrooms, viz., that of allowing 200 cubic feet per scholar.

It is desirable, where possible, to limit the height of a building to two stories above the street, inasmuch as injury not infrequently results from the excessive strain of climbing upstairs.

Accommodations for hanging clothes should be furnished outside of class rooms, with good provision for ventilation. Enclosed spaces in the halls, open at top and bottom, are suitable.

Cellars or basements must be high, dry, well-lighted and thoroughly wholesome. If there is no cellar, there must be a dry sub-floor space under the whole building.

Dust being a destroyer of pure air and a foe to health, care must be taken to avoid for floors such material as produces dust; if of cement, it must not crumble; if of wood, it must be "filled" so as to be impervious.

C—VENTILATION AND HEATING

A very large proportion of schools are so poorly provided with ventilating arrangements that they are practically dependent on open windows. To relieve this unfortunate state of things, the lower sash may be raised two inches (less, in stormy weather) and a board placed in front to deflect the air upward. The upper sash (which ought always to be movable) may be lowered an inch. These measures are attended with little risk, and give perceptible, though partial, relief.

Perforations in the sash, window pane, or wall, also give some relief. Such methods may provide sufficient air for five or six persons in a room, but are entirely inadequate for the supply of a whole class.

The attempt to ventilate schoolrooms in cold weather by the windows, in the Northern United States is either very dangerous to health or very ineffective, or both. The amount which can safely be admitted in this way may be one-fifth to one-tenth of what is needed. The existence of ventilating flues or openings does not of itself insure good ventilation. Flues may be too small, or crooked, or partly or wholly stopped up; they may discharge into other rooms or the attic instead of the outer air; they may be unprovided with means for causing the air to rise in them; they may be in many ways badly planned. To enumerate the faults which may be committed would require a treatise.

It ought to be understood by every one concerned in ventilation that large collections of persons require very large amounts of air; that the amount should be calculated, and the size of the flues determined before the house is planned; that true economy requires us to consider the system of heating and that of ventilation as inter-dependent parts of one and the same problem, and that both should form a part of the original architectural design.

The amount of fresh air to be brought into the building for each pupil should be 2,000 cubic feet per hour for younger children (under 10) and 3,000 for high school pupils. These amounts are calculated from the assumptions that the external "pure" air contains an average of 4 parts of CO_2 in 10,000; and that when the CO_2 has increased under the influence of respiration, to the amount of more than 6 in 10,000, the air may be considered "impure." Dilution to the extent mentioned above, will keep the air of the room below the point of "impurity," here assumed. The purity required by this standard is such that persons coming fresh from out of doors will not perceive any distinct closeness in the air of the schoolroom.

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"Direct radiation," or the use of steam heaters in the rooms to be warmed, furnishes no supply of fresh air If ventilation is fully provided for, as above described, direct heating is admissible as *supplemental* supply in exceptional cases, but as a rule its use is destructive of good ventilation

Effective work can be done either by furnaces or by steam heaters in the cellar ("indirect' radiation) In both cases it is exceedingly desirable to provide liberally in respect to the size and power of the apparatus

On the question of *economy* in ventilation, and the *necessary expense* of good ventilation, much may be said A great amount of warm air is necessarily thrown away in ventilation It is estimated that a very perfectly ventilated building, filled with students, expends 50 per cent more coal than the same building empty and closed, the temperature being the same This difference would be greatly lessened if we could compare the case of a well ventilated, occupied building with one badly ventilated and occupied, the latter wasting, as it does, a considerable amount of heat by open windows and by the over-heating which often accompanies bad ventilation It is certain that the additional annual expense per pupil, of the best ventilation, need not exceed the price of one or two cheap lunches The effect of perfect ventilation, where it has been tried, is, to increase the pupil's power of work about 50 per cent which is a direct saving to the town that pays for his schooling To which must be added the gain in public health (which is not easily to be estimated), since a large percentage of school children are suffering at present a perceptible diminution of vigor from the effects of foul school air

The employment of automatic regulators for keeping school rooms at a given temperature is recommended as both economical and healthful Modern methods often uselessly overheat the cellar in which the furnaces stand Waste steam from the boilers ought to be converted to the use of heating radiators A liberal salary to janitors or engineers may insure a more intelligent control of the fuel

The available methods for compelling air to move in ventilating flues are practically two 1, the ascensive force of heated air, 2, fans driven by steam or electricity for forcing air into the room or drawing it out by "suction" For the former method, it is generally desirable to make available the otherwise wasted heat of smoke flues, by causing them to run in the foul-air shaft

D —PERSONAL HEALTH

1 A *minimum* age for entering primary schools may properly be stated as five completed years

2 The program of daily work for little children should be widely different from that for older ones A forenoon session may last three hours, but no exercise should last continuously more than fifteen or twenty minutes There should be a constant change of activity, passive attention alternating with active work, recesses of a few minutes coming very frequently, and recesses of fifteen or twenty minutes at least twice in the session Adherence to one posture should be required for only a very few minutes at once Singing should come in more than once during the session If an afternoon session of two hours be added, the tasks should be lighter than the forenoon tasks Two hours must intervene between the sessions The total amount of task-work and recitation required in primary schools may equal half the nominal period of the sessions

3 Young persons of both sexes at periods of rapid bodily growth, and especially at that of sexual development, not infrequently require special relief or rest from school-work, which in the case of girls may come at periodical intervals

As the age increases, the power of concentration and continuous work is strengthened At the age of 14, *five* hours of sessions will be equivalent to *four* or *four and a half* hours of work, to which an hour of home study may rightly be added The usual length of recitations at this age may be about half an hour, long recitations encourage listlessness For pupils of full growth (18), eight hours of school sessions and home work is an average *maximum* This does not exclude the possibility of a greater amount of work for limited periods in exceptional cases among advanced pupils in vigorous health It is presumed in these estimates that the school has two half holidays or one whole holiday weekly

4 The attention of teachers and parents should be called to the necessity for wholesome and sufficient meals for scholars, especially, breakfasts and lunches The health of many children is supposed to suffer from over-study, when the chief cause of the mischief is neglect to eat a proper breakfast, or the substitution of pastry and sweets for plain lunch The establishment of lunch counters for the sale of hot milk, cocoa and plain food would be very beneficial in the case of many city schools Lunch is not a superfluity, but a necessity, in cases where long sessions and distant residences keep the pupils away from home five or six hours at a time

5 The systems of calisthenics in common use—free-hand exercises in full class rooms, for five minutes at a time—serve a very useful purpose as a partial relaxation, but are quite inadequate, considered as a means of bodily development For the latter purpose, gymnastic training of a more serious kind is very desirable Its influence is felt in the development of the mental faculties, it adds force and firmness to the moral nature, it furnishes an important correction of those depressant influences of city life, which have a tendency to lower the vitality of millions of our population at the present time It is hoped that the systematic teaching of gymnastics to all our public school children may soon become an indispensable part of the school course, but it must always be remembered that the more violent athletic sports tend to heart strain and other disabilities that shorten life

6 The habit of constipation is often acquired as a result of deprivation of bodily freedom, and confinement to a stooping or sitting posture, together with the mental tension of school work and the sense of constraint In order to avoid this great evil and its frequent attendant, dyspepsia, it is desirable to give recess with liberty of play out of doors, as often as is convenient This is especially applicable to young children Retention of urine now and then occurs under too strict school discipline, and may work serious injury The friendly oversight of a teacher at recess is desirable, often indispensable

E—EYESIGHT

The eyes are often affected injuriously by school work carried to excess, or conducted amid unwholesome surroundings There is a strong tendency to the production of near sightedness, which can, to a great extent, be remedied by the avoidance of known causes Among the direct causes of near sight are—bad light, bad position at work, too protracted work, bad print, and to these must be added, as indirect causes, bad ventilation and heating, poor food, and whatever impairs the vigor of health

Light in schoolrooms should never strike the pupil in the face while at work

Excess of light is less common than deficiency, but is also harmful No desk can be more than twenty feet from the windows of an ordinary schoolroom (supposing the top of the windows to reach the height of about twelve feet from the floor) without impairing the light

A stooping position, and the wearing of tight neck-clothing, while at work, are injurious to the eyes

To prevent scholars from taking bad positions in writing, it is recommended that children be directed to sit upright, facing the desk squarely, and be taught vertical writing Also, that desks be slightly inclined, their front edge to overlap the edge of the seat a little, and the height to be such that the fore arm easily passes over it Seats ought to support the back and shoulders in reading, without favoring a tendency to lounge The foot must rest firmly on the floor or on a foot-rest The average graded school requires three sizes of desks and seats to each room

The habit of holding work too near the eyes *strains* them and fosters a tendency to near sight For the youngest children, this distance should be not less than 25 cm = 10 inches, for those of 8 to 10 years, 33 cm = 14 inches Badly proportioned desks and seats, especially where they are too far apart, favor this habit

The eyes should have some rest from tasks every half-hour Fine embroidery, fine detail in map-drawing, or penmanship, and the use of fine type, must be discouraged

Such defects as far-sight, astigmatism, and affections of the muscles of the eye, are rather common in school children, they often cause headache and other forms of illness The remedy lies in the use of suitable glasses, as prescribed by physicians Test-types may properly be used by teachers to ascertain what scholars have marked defects of sight

F—SANITARY ADMINISTRATION OF SCHOOLS

The duties comprised under this head may properly be intrusted to one man in small places, in large towns a division of work will be necessary The officer upon whom the charge is laid—or in all cases, the chief officer—must be a well-educated physician, with a special and practical knowledge of sanitary science He should be appointed by the school authorities He is here designated the medical school officer It is the duty of this officer to satisfy himself (by personal inspection, if necessary) that all children admitted to school are protected, either by successful vaccination or a previous attack of the disease, against smallpox He should also formulate, and have power to enforce, in conjunction with the State or municipal health officers, regulations to prevent the dissemination of infectious diseases through the schools

All plans for school buildings, premises and appliances should be submitted for his approval in sanitary points Personally or by deputy he should examine all buildings and premises, with reference to the arrangements for ventilation and heating, size and lighting of rooms, furniture, water closets, urinals, drains, plumbing, water supply, safety from fire, and other points affecting health or safety He should have the right of entrance at all times, and should be armed with ample powers

The medical school officer should give personal instruction to teachers, of a practical kind, embracing 1, an explanation of the existent sanitary regulations, with such physiological reasons and comments as may seem called for, 2, explanation of the sanitary arrangements existing in the schools, their practical management, and so much of the theory as may seem desirable, 3, explanation of the structure and use of the eye, and other parts of the bodily frame, with remarks on food, clothing, recess, study and kindred topics, so far as it seems to him desirable and useful to enter upon such considerations

The said officer has medical authority in cases of immediate exigency, but is not authorized or expected to bestow further medical care as a part of his official duty The extent to which personal medical *inspection* of scholars is made, and individual medical *advice* is given, must vary much with different classes of the population It is not susceptible of extended adoption at present in America

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THE SCHOTT METHOD OF TREATING CHRONIC DISEASES OF THE HEART BY BATHS AND GYMNASTICS

Read at the Meeting of the Mississippi Valley Medical Association, at Indianapolis, Oct 6, 1893

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We hear much nowadays about the wonderful progress made by modern surgery In contrast thereto the advances along the lines of internal medicine, particularly of therapeutics, appear insignificant, and their actual importance is likely to be underestimated Nevertheless, if the history of therapeutics be read aright for the past hundred years, many suggestions will be found that mark the beginnings of new eras in the art of healing Such an epoch, for example, began with the introduction of digitalis in England by Withering toward the end of the last century No single drug, perhaps, has rescued more lives from an untimely grave than that incomparable and indispensable remedy Yet immeasurable as are its capabilities, there are well-recognized limitations to its usefulness Accordingly many attempts have been made to discover a substitute free from its objections or some means of supplementing its deficiencies As yet no such agent in the form of a drug has been found But, startling as the statement may sound, such a means of replacing and supplementing digitalis has at last been devised in the therapeutic method which is the subject of this paper And the honor of developing if not discovering it belongs to two German physicians, Dr August Schott, now dead, and his surviving brother Dr Theodore Schott Early in this century patients with heart disease were subjected to a vigorous course of depletion by blood letting and reduction of diet, after the manner of Albertini and Valsalva, in the hope of quieting the excited heart's action and overcoming hypertrophy But such measures were calculated to weaken rather than strengthen the cardiac muscle, and originated in an erroneous conception of the real difference between cardiac hypertrophy and dilatation In contrast to this treatment the great Stokes suggested exercise and mountain climbing, as the best mode of inducing hypertrophy of the heart-muscle through increase of its physiological function Strange to say, his suggestions were but little heeded and indeed became in time forgotten During the last decade, the recommendation of Stokes was revived and put in practice by Oertel of Munich who, however, supplemented it by the reduction of the dietary and of ingested liquids Such remarkable results were obtained, and their publication aroused such enthusiasm, that this new method of management was tested extensively

Further trial of the Oertel method disclosed objections, however Indeed, along with reports of benefit in some cases, came published instances of not only positive injury, but even death due to the treatment Opponents arose, foremost among whom were Sommerbrodt[1] and Lichtheim[2] of Germany, so that now Oertel's method is considered appropriate to but a limited number of cases, those only in which compensation has not been lost Contemporary with the investigations of Oertel, Drs August and Theodore Schott were engaged at Bad-Nauheim in studying the effect on the heart and circulation of warm saline and carbonated baths Their observations and conclusions were first published at the beginning of the last decade A certain Dr Beneke,[3] also at Bad-Nauheim, had some years previously reported his observations on the effect of the baths in cases of articular rheumatism, and asserted his belief in their efficacy in promoting the absorption of inflammatory products upon the endocardium, and thereby occasioning the cure of cardiac lesions depending on such endocarditic processes But the condition absolutely indispensable to their absorption was, he declared, that they be of recent origin

Doubt may be wisely expressed as to the accuracy of Beneke's observations, or, rather as to the validity of his conclusions It is a well-recognized fact that after a time murmurs and other signs which have led to a diagnosis of some lesion depending on previous endocarditis, occasionally disappear, leaving the organ apparently free from disease Moreover it is so confessedly difficult, nay even impossible, to determine in every case whether a murmur be organic or inorganic, that it is scarcely hypercritical to suggest an error on the part of Beneke in having mistaken for endocarditic murmurs what were in reality inorganic Although his observations seem to have been the first[4] to demonstrate the beneficial rather than injurious effects of warm saline baths charged with carbonic acid in cases of heart disease, they were, nevertheless, limited mainly if not exclusively to patients displaying supposed signs of previous endocarditis His work in no wise depreciates the value of that done by the Schott brothers, nor invalidates the claim made by Dr Theodore Schott that they were carrying on studies wholly independent of Beneke Furthermore, the latter's work sinks into insignificance in comparison with the extent and variety of the observations of the Drs Schott And it may be said with truth that their experience has embraced all forms of cardiac disease which are at all suitable for treatment by baths Moreover, his extensive experience has enabled Dr Theodore Schott to determine the indications and contra-indications for the employment of his method In addition, Dr August Schott and his brother originated a system of gymnastic exercises against resistance which forms an essential part of their treatment For these reasons it is customary to characterize this particular form of cardiac therapeutics as the "Schott method" Indeed, it is no more than the just desert of Dr Theodore Schott and his late brother to attribute to them the credit of having introduced and elaborated a method capable of restoring most cases of heart disease to a state of complete compensation, after the failure of other means, such as digitals

DESCRIPTION OF THE METHOD

1 *The Baths* —This consists in the administration of warm baths, either simple saline devoid of carbonic acid, or saline containing a large percentage of the gas The temperature varies according to special indications, between 92 and 86 degrees Fahrenheit, these extremes being rarely exceeded. The duration of the bath is five or eight to twenty or twenty-five minutes, being short at first and gradually lengthened Simple saline baths are generally given at the commencement of the course, those containing carbonic acid being administered only after the patient's heart has gained strength sufficient to endure them The initial strength of the baths varies according to indications In cases of extreme cardiac weakness or of marked anæmia, waters deprived by evaporation of all carbonic acid and much of their saline constituents are employed Gradually and cautiously the baths are strengthened by the addition of salts in the form of what is known as "mutterlauge," which is nothing more or less than the strong solution of salts collected in the process of evaporation just alluded to At the same time, as the degree of concentration is increased, the temperature of the baths is gradually reduced At last, after a variable period, as determined by the patient's condition, saline baths charged with carbonic acid, in such a percentage as is indicated for each individual patient are administered These have a temperature of 30 5 degrees Centigrade or about 87 degrees Fahrenheit, and is that of Spring 7, most commonly prescribed as it flows into the tubs Baths are not ordered daily during the whole course, but a day of rest is interposed as often as the physician deems necessary Dr Schott generally orders a day of rest after three days of baths But one bath is taken a day This is by preference in the morning, but not sooner than one hour after breakfast Immediately after his bath the patient returns to his room where he partially undresses and lies down, warmly covered, for at least one hour.

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[1] Sommerbrodt 'Ueber den Einfluss des Bergsteigens auf das Herz und die Gefasse, Berliner Klin Wochr 1885 Dalegung der Hauptbedeutungen für die Ueberanstrengung des Herzens, Berliner Klin Woche 1889

[2] Verhandlung des Congresses für Innere Medicin zu Wiesbaden 1889

[3] Beneke "Zur Therapie des Gelenkrheumatismus und der damit verbundenen Krankheiten" 1872

[4] Rosenstein Von Ziemssen s Cyclopedia 1876

Not only is physical rest advisable after a bath, but during the bath absolute quiet of body and mind is enjoined that the heart may not be subjected to unnecessary strain. Such a course of balneological treatment extends over a period of from five to seven weeks. A month of rest at some salubrious spot is then taken, after which a second course of four to six weeks is advisable in many cases.

2. *The Gymnastics.*—A second factor in this method considered indispensable by Dr. Schott consists in the employment of extremely simple, but systematic exercises of the trunk and extremities. A fundamental principle of these gymnastics is that the patient's movements be restricted by another person, preferably by a trained assistant, styled the gymnast. These exercises consist of movements of extension, flexion and rotation. Movements of the hand and foot apart from the corresponding arm and leg are not practiced. But such exercises as are permitted by the elbow, shoulder, knee and hip joints are carried out, either of the upper extremities in unison, or singly, as in the case of the lower limbs. In addition to these movements of the extremities, the trunk is bent and rotated in such manner as is permitted by the spinal column and calls into play the chief lumbar and abdominal muscles. Space will not permit an extended description of these exercises at this time. It must suffice, therefore, to state the laws that Dr. Schott lays down for the guidance of both patient and assistant. They are as follows:

A movement should never be immediately repeated. Each one should be followed by a short period of repose, and should not be made so rapidly or against such a degree of resistance as to cause acceleration of the pulse or respirations. All movements should be carried out slowly and steadily, without jerkiness, and joints not actually in use during the movement should be kept extended. That the exercises may be carried out in this fashion, the assistant should be carefully instructed, not only how to exert proper resistance, but should be able to bestow intelligent and watchful attention upon the condition of the patient during the seance and at once insist on rest upon any evidence of respiratory or circulatory embarrassment. In some cases the patient resists his own movements by calling into play antagonistic muscles, and is thus enabled to exercise independently of a gymnast.

EFFECTS OF THE BATHS

That there is a definite effect exerted by saline baths is beyond question, as shown by clinical observation and experiment. Dr. August Schott in the laboratory at Breslau, subjected shaved rabbits to baths in a tub so constructed that by means of a movable partition it was divided into two chambers or compartments. One was filled with plain, the other with saline water, both of the same temperature. The animal was first placed in the plain water bath, and the effects of the blood pressure noted by means of a mercurial manometer introduced into the trachea. Then, little by little, the movable partition was raised, thus permitting the admixture of the salt solution with the plain water, and the effects were again carefully observed. It was thus noted that as the surface of the body became subjected to the influence of the salt solution, the blood pressure rose 5 to 10 mm. with a 10 per cent. salt solution. Carbonated water increased blood pressure 10, 20 and even 30 mm.

From careful and abundant experimentation it has been pretty well determined that the absorptive power of the skin is quite limited, and that there is practically no absorption of salts in solution in water. Dr. Theodore Schott is of opinion that in case of salt baths the effect is produced through "imbibition" or penetration, not absorption. The salts come in actual contact with the peripheral ends of the sensory nerves residing in the skin, and the stimulation thus exerted is carried upward to the central nervous system, from which centers a reflex influence is exerted upon the heart and blood vessels. But whatever be the *modus operandi*, it is certain that, clinically and experimentally, we observe as a result of these baths a slowing of the pulse with increased volume and strength. At the same time the irregularity, if such have existed, is lessened or even disappears. It is evident, therefore, that the cardiac contractions are increased in vigor and the cavities are better emptied. This permits a positive diminution in the size of a dilated heart. That this is so, can be and has been repeatedly demonstrated, by means of accurate percussion of the cardiac areas, before and after the bath. Proof of this will be given in the following report of the writer's observations. Moreover, the heart sounds become louder, the previously accented second pulmonary sound less accented and the second aortic sound more intense, thus showing a better filling of the arterial system; murmurs inappreciable because of cardiac weakness may be temporarily intensified and rendered audible. This marked and beneficial effect of the action of the heart does not disappear at once, but persists for a considerable time subsequent to the baths.

Subjectively, the patient, on stepping into the bath, experiences a more or less pronounced sensation of chill, according to the temperature of the water. In about a minute this feeling of chilliness is replaced by one of agreeable warmth and well being. The first one or two baths occasion a feeling of weight or oppression on the chest, sometimes most pronounced in the epigastrium. Contrary to what might be expected, respirations are not rendered more difficult and rapid, but are generally slow, full and regular. So long as absolute quiet in the bath is maintained the subjective sensations are agreeable and comfortable. But any exertion, however slight, is attended by increased oppression of the chest, acceleration of the pulse and a sensation of cold in the part of the body moved. These sensations are temporary and quickly subside upon a return to perfect physical rest.

After the bath there is usually a sense of well being, particularly of ease and lightness in the chest. If dyspnea have existed previously, it is now somewhat less. The first few baths are apt to induce some feeling of fatigue and disposition to sleep. Should the initial chilliness continue and debility, insomnia and anorexia appear and persist during a course of such baths, there is some defect, either of temperature, strength, duration or all of these, which demands investigation and correction.

If properly administered these baths occasion gradual and perceptible amelioration of symptoms. One of the most pronounced results which is specially apt to attract the patient's attention, is improved diuresis, indicating lessened renal congestion Indeed, there is often an urgent desire for micturition during the bath

EFFECTS OF THE GYMNASTICS

Upon the heart and pulse these may be said to be similar to those of the baths The rate of the pulse falls and volume and strength are increased, yet not in so marked a degree as during the baths If during the exercises a quickening of the pulse results from too great resistance or other faulty procedure, this acceleration is generally but temporary, and after the seance the quality and rate of the pulse are generally improved However, accurate percussion demonstrates a diminution of the area of deep-seated cardiac dullness, or an actual lessening in the size of the dilated heart Auscultation reveals similar improvement in the heart sounds and corresponding changes in murmurs to those mentioned as effects of the balneological treatment These favorable effects, however, are less enduring than when produced by the baths

The results of these two modes of treatment are therefore similar in kind, but somewhat different in degree and duration It is thus plain that they supplement each other admirably, and the gymnastics should form an integral part of this method of treatment

INDICATIONS AND CONTRA INDICATIONS

During the past twenty years, Dr Theodore Schott has treated thousands of cases of chronic cardiac disease after this manner, and his statements are that it is suitable to all forms of chronic heart disease, excepting aneurism of the heart or of the large vessels, and advanced general arterio-sclerosis In such cases, disastrous consequences would be likely to follow the heightened intravascular and intracardiac blood pressure produced by the treatment Organic valvular disease forms no contra indication to its employment Indeed, some of Dr Schott's most brilliant results have been secured in precisely this class of lesions Fraentzel, in his recent work on diseases of the heart, expresses himself as opposed to the use of the balneological treatment in cases in which compensation has been lost Yet Dr Schott has repeatedly demonstrated most striking restoration of compensation in cases of the utmost gravity that had resisted all other form of treatment Such utterances as that of Fraentzel are based on either ignorance or prejudice In a word, it may be stated that with the exception of those lesions mentioned, all cases of chronic cardiac disease are suitable to this method, provided the cardiac muscle retains sufficient integrity to respond to stimulus of any kind Nevertheless, the powerful stimulation produced by the baths is capable of working great harm, even death, and undoubtedly it was this possibility which Fraentzel had in mind Hence this method ought never to be employed by those not acquainted with the indications and versed in its details

Functional disorders, particularly of neurotic origin, are likewise strikingly benefited Indeed, Dr Schott claims highly satisfactory results in cases of Graves's disease Anemic hearts suffering from the so-called "curable mitral regurgitation," can be completely restored to health, and in a far shorter time than by any other system of therapeutics It is specially applicable also to hearts dilated from over strain

Although suitable to so many cases, and effecting such brilliant results in a very great number of cardiac lesions, it must not be assumed that permanent restoration to health or even lasting improvement is secured in all cases There is a limit to human ability, and unless the cardiac muscle be capable of undergoing compensatory hypertrophy, neither this nor any other system of therapeutics can effect more than a transient improvement

As examples of what Dr Schott has been able to accomplish, two cases may be cited which it was the writer's privilege to examine this past summer They were cases of patent foramen ovale, one in a girl of 15 and uncomplicated, the other in a boy of 16 and complicated by pronounced mitral stenosis Both had come to Dr Schott for treatment less than four years before In both, all signs and symptoms were present at that time of loss of compensation with relative incompetence of the tricuspid valves, dyspnea, cyanosis, pulsating jugulars, and in the girl, particularly, enormously distended and pulsating liver Œdema was not present The hearts in both patients were greatly dilated; the pulses feeble and rapid In both was audible a characteristic rolling murmur of maximum intensity over the body of the sternum, and in the youth there was also a long, rough pre-systolic bruit of mitral stenosis Both patients had tried the most approved medication, and had been sent to Bad-Nauheim as a last resort More unfavorable cases could scarcely have been found A course of balneological treatments had been given during each of three summers, and gymnastics maintained meantime At the date of the writer's examination, July 28, last, there was every evidence of restored compensation and both patients expressed themselves as feeling well The boy, particularly, stated he was able to take daily walks of considerable length, and could even ascend a flight of stairs without much discomfort or breathlessness In both there were signs of the organic lesions, but the hearts had undergone such enormous hypertrophy as to have occasioned protuberance of the sternum and adjacent ribs in a most striking manner Needless to add, both patients were loud in their praises of the Schott method

Case 1—This is the case of the writer Early in the last decade the writer's attention was drawn to this system of cardiac therapeutics by an article from the pen of Dr Theodore Schott which appeared in the *Berliner Klinische Wochenschrift*, and which occasioned his resolve to some day visit Bad-Nauheim for the purpose of personal investigation and treatment Circumstances did not prove favorable to the fulfilment of this design until this past summer June 24, last, he arrived in Bad-Nauheim and presenting himself at once to Dr Schott he was examined and subjected to treatment

The writer is 42 years of age, weighs 147 pounds, and is five feet eight inches in height Family history is that of strong predisposition to chronic arterio-sclerosis and consequent cardiac disease, on the father's side but on the mother's no hereditary taint of any kind Patient had scarlatina at 3 years, gastric fever at 19, typhoid fever at 31, never any articular rheumatism or pneumonia At 31 years of age, history of cardiac over strain that was repeated several times in the next ten years Six years ago the opinion was expressed by one of the ablest medical men in this country that the difficulty was an organic mitral affection, stenosis predominating At the date of Dr Schott's examination the symptoms were moderate dyspnœa and pain in the precordia upon walking, pulse small, very weak and rapid on moderate exertion, but not intermittent, countenance cyanotic and sallow, digestive disturbance pronounced, urine scanty, no appreciable enlargement from passive hyperæmia of liver or spleen, no œdema Physical examination revealed all the signs of dilatation of the right ventricle with moderate dilatation of the left, the apex beat being situated 1 cm outside of the mammillary line, but in the fifth intercostal space Upon auscultation the first sound at the apex was preceded by a short, rough murmur which terminated in a short systolic whiff, the second pulmonary sound was very accented and split, a diaphragmatico-pericardial friction sound was also audible over the lower border of the right ventricle There was no evidence of chronic arterio sclerosis In repose the pulse was about eighty in the minute

Treatment by means of baths was commenced the following day, June 25

Subjoined is a chart giving the baths and their observed effects

Chart of Baths and their Effects in Case I

Bath					Pulse Rate					
Date	Spring	Nature	Temperature	Duration	Before Bath	At Beginning	Middle	At End	In Bed	Remarks
June 25	Nº 7	Simple Saline	Cent. 32½°	Min 8					62	#1 Slight oppression on chest & in epigastrium 2 hrs in bed, first sound of fair strength.
26	7		32½°	10		74	64	64	70	#2 - Pulse good & regular Slight oppression Lips slightly cyanotic at end of bath.
27	7	.	32°	10	74	74	70	68	64	#3. - Pulse during bath plainly fuller and stronger than yesterday Less oppression no cyanosis.
29	7	1 L Matter La.	32°	11	74	68	64	64	62	#4 - Pulse still fuller, more equal & tension unmistakably greater today. Still less oppression.
30	7	1	32°	12	74	68	64	64	62	#5 - Observations of yesterday confirmed
July 1	7	1	32°	12	74	68	64	64	62	#6. Rate the same I am astonished at the fullness and strength of pulse at end of bath.
3	7	2	32°	14		72	68	68	74	#7 - Pulse of good strength but a little irregular in time; increased sense of warmth during bath.
4	7	2	32°	15		84	80	72	67	#8 Intermitted several times during fore part, but more regular, stronger & full at close.
5	7	2	32°	16		80	70	65		#9 - Bath gave feeling of rest Pulse was made regular and full.
7	4	3	31½°	18		76	64	62	72	#10 - Pulse in bath full, regular & strong Increased diuresis after bath.
8	7	3	31°	19	70	72	68	68	68	#11 - Pulse full and strong, feeling of warmth Climbed stairs to room.
9	7	3	31°	20	70	72	68	68		#12 - Feeling rather depressed for past day or two, probably result of gymnastics.
11	4	Effervescing	Nat'l 30½°	8	72		68	65	68	#13 - Pulse full and strong as with other baths, pleasant feeling of warmth & with slight oppression.
12	4		30½°	9		80	70	66	68	#14 - P of good quality Feel even better than yesterday Delightful feeling of warmth during bath.
13	7		30½°	10						#15. -
15	7	„	30½°	12		72				#16 - P slow, full & regular Epigastric pulsation faint, apex beat 1 c.m. within nipple line.
16	4		30½°	14	Standing 100	full 88 80	fuller 76	75	65	#17 P taken every 3 min, remained at 76 from middle to end, tension grew greater toward end. (By Dr. Herrmann.)
17	7	.	30½°	15			-			#18 Dr Herrmann made no observation today
19	7	.	30½°	16	72	68 64	60	60	65	#19 - P 60 after 6 min & until close of bath, counted at intervals of 3 min. grew progressively fuller.
20	4		30½°	17	68	68	60	60	60	#20 In addition to usual observations (all confirmed) apex beat grew obviously stronger & epigastric pulsation disappeared while in bath.
21	4	„	30½°	18	88	72	68	64	62	#21 Pulse rate of 88 was noted just after walking, it fell before bath, after 30 min. rest to 72.
23	4	.	30½°	20	68	67	64	60		#22 -
24	4		30½°	20	75	75	66	64	62	#23 Am struck with the regularity & firmness of P in bath Its quality is excellent in general. Gt. sense of comfort & ease of chest follows
25	4		30°	20	Good 68	80	67	64	64	bath past week #24 Baths produce feeling of chilliness followed by warmth in 1 min., no oppression. P of good strength & full.
27	4	Current	30½°	8	Rather weak 85	70	76	76	62	#25 P a little irregular in time but very full and more than usually strong. In bed P. was not full & strong as after plain effervescin
28	4	Effervescing	30½°	20	74	68	62	60	65	#26 P. after 10 min. became very full strong & regular After 20 min fullness & strength even more marked. In bed less strong though of g. qual.
29	4		30½°	20	70	72	65	62	70	#27 During bath P was a little irreg in time & I felt considerable oppression in abdomen. P how'er became of g. strength & fullness.

GENERAL REMARKS

Careful percussion of the heart before and after the seventh bath, showed slight but unmistakable contraction of its limits about 1 cm at right border

8th Bath July 4 The intermittance of the pulse may have been due to the bath following too soon a hearty breakfast, but for two or three days past the gymnastics have caused oppression in the precordia proved diuresis, indicating lessened renal congestion Indeed, there is often an urgent desire for micturition during the bath

EFFECTS OF THE GYMNASTICS

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The results of these two modes of treatment are therefore similar in kind, but somewhat different in degree and duration It is thus plain that they supplement each other admirably, and the gymnastics should form an integral part of this method of treatment

INDICATIONS AND CONTRA INDICATIONS

During the past twenty years, Dr Theodore Schott has treated thousands of cases of chronic cardiac disease after this manner, and his statements are that it is suitable to all forms of chronic heart disease, excepting aneurism of the heart or of the large vessels, and advanced general arterio-sclerosis In such cases, disastrous consequences would be likely to follow the heightened intravascular and intracardiac blood pressure produced by the treatment Organic valvular disease forms no contra indication to its employment Indeed, some of Dr Schott's most brilliant results have been secured in precisely this class of lesions Fraentzel, in his recent work on diseases of the heart, expresses himself as opposed to the use of the balneological treatment in cases in which compensation has been lost Yet Dr Schott has repeatedly demonstrated most striking restoration of compensation in cases of the utmost gravity that had resisted all other form of treatment Such utterances as that of Fraentzel are based on either ignorance or prejudice In a word, it may be stated that with the exception of those lesions mentioned, all cases of chronic cardiac disease are suitable to this method, provided the cardiac muscle retains sufficient integrity to respond to stimulus of any kind Nevertheless, the powerful stimulation produced by the baths is capable of working great harm, even death, and undoubtedly it was this possibility which Fraentzel had in mind Hence this method ought never to be employed by those not acquainted with the indications and versed in its details

Functional disorders, particularly of neurotic origin, are likewise strikingly benefited Indeed, Dr Schott claims highly satisfactory results in cases of Graves's disease Anemic hearts suffering from the so-called "curable mitral regurgitation," can be completely restored to health, and in a far shorter time than by any other system of therapeutics It is specially applicable also to hearts dilated from over strain

Although suitable to so many cases, and effecting such brilliant results in a very great number of cardiac lesions, it must not be assumed that permanent restoration to health or even lasting improvement is secured in all cases There is a limit to human ability, and unless the cardiac muscle be capable of undergoing compensatory hypertrophy, neither this nor any other system of therapeutics can effect more than a transient improvement

As examples of what Dr Schott has been able to accomplish, two cases may be cited which it was the writer's privilege to examine this past summer They were cases of patent foramen ovale, one in a girl of 15 and uncomplicated, the other in a boy of 16 and complicated by pronounced mitral stenosis Both had come to Dr Schott for treatment less than four years before In both, all signs and symptoms were present at that time of loss of compensation with relative incompetence of the tricuspid valves, dyspnea, cyanosis, pulsating jugulars, and in the girl, particularly, enormously distended and pulsating liver Œdema was not present The hearts in both patients were greatly dilated; the pulses feeble and rapid In both was audible a characteristic rolling murmur of maximum intensity over the body of the sternum, and in the youth there was also a long, rough pre systolic bruit of mitral stenosis Both patients had tried the most approved medication, and had been sent to Bad-Nauheim as a last resort More unfavorable cases could scarcely have been found A course of balneological treatments had been given during each of three summers, and gymnastics maintained meantime At the date of the writer's examination, July 28, last, there was every evidence of restored compensation and both patients expressed themselves as feeling well The boy, particularly, stated he was able to take daily walks of considerable length, and could even ascend a flight of stairs without much discomfort or breathlessness In both there were signs of the organic lesions, but the hearts had undergone such enormous hypertrophy as to have occasioned protuberance of the sternum and adjacent ribs in a most striking manner Needless to add, both patients were loud in their praises of the Schott method

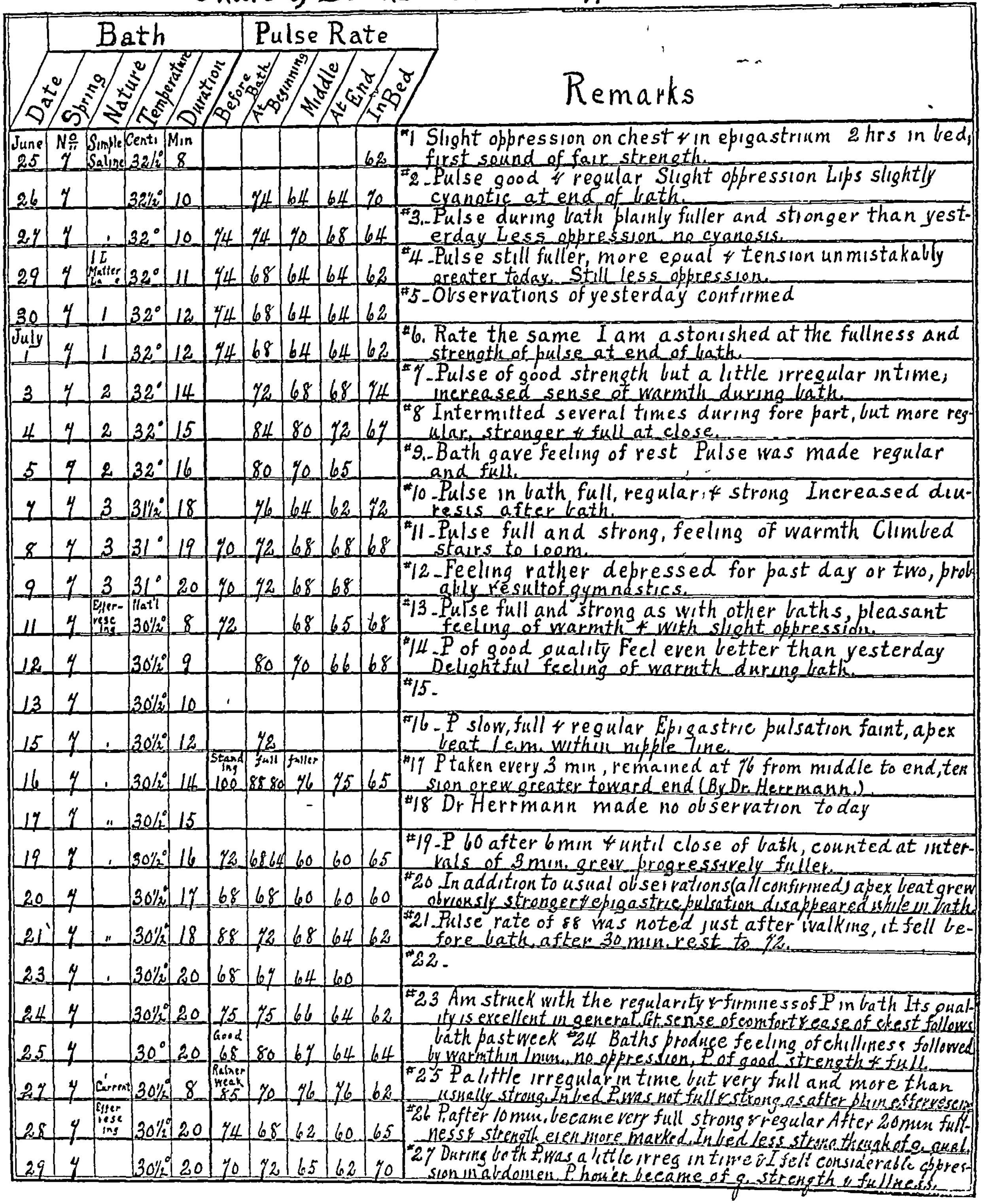
Case 1—This is the case of the writer Early in the last decade the writer's attention was drawn to this system of cardiac therapeutics by an article from the pen of Dr Theodore Schott which appeared in the *Berliner Klinische Wochenschrift*, and which occasioned his resolve to some day visit Bad-Nauheim for the purpose of personal investigation and treatment Circumstances did not prove favorable to the fulfilment of this design until this past summer June 24, last, he arrived in Bad-Nauheim and presenting himself at once to Dr Schott he was examined and subjected to treatment

The writer is 42 years of age, weighs 147 pounds, and is five feet eight inches in height Family history is that of strong predisposition to chronic arterio sclerosis and consequent cardiac disease, on the father's side but on the mother's no hereditary taint of any kind Patient had scarlatina at 3 years, gastric fever at 19, typhoid fever at 31, never any articular rheumatism or pneumonia At 31 years of age, history of cardiac over strain that was repeated several times in the next ten years Six years ago the opinion was expressed by one of the ablest medical men in this country that the difficulty was an organic mitral affection, stenosis predominating At the date of Dr Schott's examination the symptoms were moderate dyspnœa and pain in the precordia upon walking, pulse small, very weak and rapid on moderate exertion, but not intermittent, countenance cyanotic and sallow, digestive disturbance pronounced, urine scanty, no appreciable enlargement from passive hyperæmia of liver or spleen, no œdema Physical examination revealed all the signs of dilatation of the right ventricle with moderate dilatation of the left, the apex beat being situated 1 cm outside of the mammillary line, but in the fifth intercostal space Upon auscultation the first sound at the apex was preceded by a short, rough murmur which terminated in a short systolic whiff, the second pulmonary sound was very accented and split, a diaphragmatico-pericardial friction sound was also audible over the lower border of the right ventricle There was no evidence of chronic arterio sclerosis In repose the pulse was about eighty in the minute

Treatment by means of baths was commenced the following day, June 25

Subjoined is a chart giving the baths and their observed effects

Chart of Baths and their Effects in Case I



	Bath				Pulse Rate					
Date	Spring	Nature	Temperature	Duration	Before Bath	At Beginning	Middle	At End	In Bed	Remarks
June 25	No. 7	Simple Saline	Centi 32½°	Min 8					62	#1 Slight oppression on chest & in epigastrium 2 hrs in bed, first sound of fair strength.
26	7		32½°	10		74	64	64	70	#2 - Pulse good & regular Slight oppression Lips slightly cyanotic at end of bath.
27	7	.	32°	10	74	74	70	68	64	#3. - Pulse during bath plainly fuller and stronger than yesterday Less oppression, no cyanosis.
29	7	1 L Matter [illegible]	32°	11	74	68	64	64	62	#4 - Pulse still fuller, more equal & tension unmistakably greater today. Still less oppression.
30	7	1	32°	12	74	68	64	64	62	#5 - Observations of yesterday confirmed
July 1	7	1	32°	12	74	68	64	64	62	#6. Rate the same I am astonished at the fullness and strength of pulse at end of bath.
3	7	2	32°	14		72	68	68	74	#7 - Pulse of good strength but a little irregular in time; increased sense of warmth during bath.
4	7	2	32°	15		84	80	72	67	#8 Intermitted several times during fore part, but more regular, stronger & full at close.
5	7	2	32°	16		80	70	65		#9. - Bath gave feeling of rest Pulse was made regular and full.
7	7	3	31½°	18		76	64	62	72	#10 - Pulse in bath full, regular & strong Increased diuresis after bath.
8	7	3	31°	19	70	72	68	68	68	#11 - Pulse full and strong, feeling of warmth Climbed stairs to room.
9	7	3	31°	20	70	72	68	68		#12 - Feeling rather depressed for past day or two, probably result of gymnastics.
11	7	Effervescing	Nat'l 30½°	8	72		68	65	68	#13 - Pulse full and strong as with other baths, pleasant feeling of warmth & with slight oppression.
12	7		30½°	9		80	70	66	68	#14 - P of good quality Feel even better than yesterday Delightful feeling of warmth during bath.
13	7		30½°	10						#15 -
15	7	,	30½°	12		72				#16 - P slow, full & regular Epigastric pulsation faint, apex beat 1 c.m. within nipple line.
16	7	,	30½°	14	Standing 100	full 88 80	fuller 76	75	65	#17 P taken every 3 min, remained at 76 from middle to end, tension grew greater toward end (By Dr. Herrmann.)
17	7	"	30½°	15			-			#18 Dr Herrmann made no observation today
19	7	,	30½°	16	72	68 64	60	60	65	#19 - P 60 after 6 min & until close of bath, counted at intervals of 3 min. grew progressively fuller.
20	7		30½°	17	68	68	60	60	60	#20 In addition to usual observations (all confirmed) apex beat grew obviously stronger & epigastric pulsation disappeared while in bath.
21	7	"	30½°	18	88	72	68	64	62	#21 Pulse rate of 88 was noted just after walking, it fell before bath after 30 min. rest to 72.
23	7	,	30½°	20	68	67	64	60		#22 -
24	7		30½°	20	75	75	66	64	62	#23 Am struck with the regularity & firmness of P in bath Its quality is excellent in general. Gt. sense of comfort & ease of chest follows
25	7		30°	20	Good 68	80	67	64	64	bath past week #24 Baths produce feeling of chilliness followed by warmth in 1 min., no oppression, P of good strength & full.
27	7	Current	30½°	8	Rather weak 85	70	76	76	62	#25 P a little irregular in time but very full and more than usually strong. In bed P. was not full & strong as after plain effervescing
28	7	Effervescing	30½°	20	74	68	62	60	65	#26 P. after 10 min. became very full strong & regular After 20 min fullness & strength even more marked. In bed less strong though of g. qual.
29	7		30½°	20	70	72	65	62	70	#27 During bath P. was a little irreg in time & I felt considerable oppression in abdomen. P. how'er became of g. strength & fullness.

GENERAL REMARKS

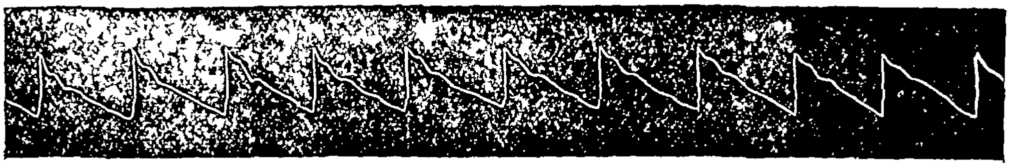
Careful percussion of the heart before and after the seventh bath, showed slight but unmistakable contraction of its limits about 1 cm at right border

8th Bath July 4 The intermittance of the pulse may have been due to the bath following too soon a hearty breakfast, but for two or three days past the gymnastics have caused oppression in the precordia and the pulse has been small and weak on exercise

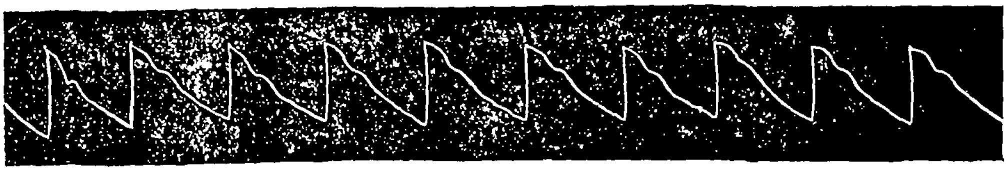
10th Bath July 7 I note that venous congestion is becoming less visible, and this bath produced a decided feeling of comfort in the chest Shortness of breath is greatly improved and the action of the kidneys is remarkably free

12th Bath July 9 Notwithstanding the discomfort due to gymnastics for the past week the precordial dullness is certainly diminished at the right, and apex beat is permanently within the nipple line

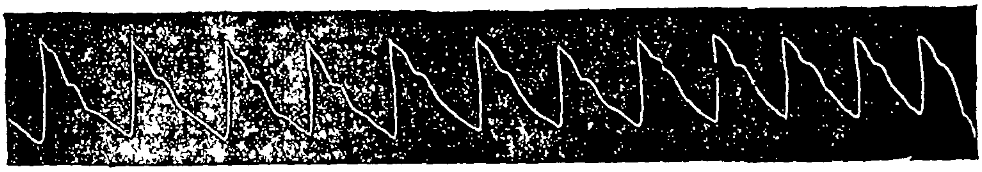
13th Bath July 11 Careful percussion, before and after bath, showed a retraction of the right border of 1 cm



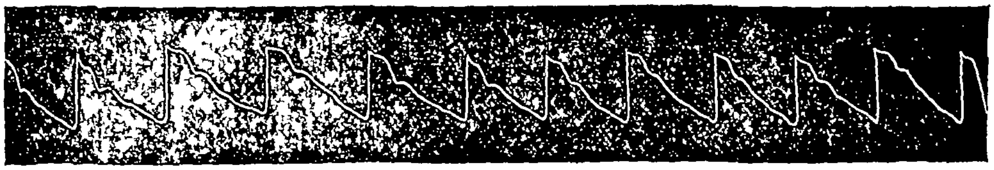
July 7, 1893 Before the exercises Frequency 68–74, pressure 105 mm



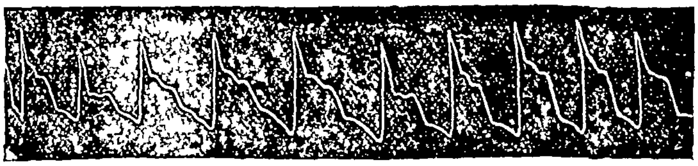
July 7, 1893 After 15 minutes exercise Frequency 64, pressure 125 mm



July 7, 1893 After 40 minutes exercise, with pause of 5 minutes Frequency 66, pressure 140 mm



July 14 1893 Pressure 155 mm



July 30, 1893 After 5 weeks treatment Pressure 165 mm, frequency 92

16th Bath July 15 For past day or two I note marked lessening of all symptoms, and the heart has nearly returned to normal size

17th Bath July 16 Dr F Herrmann of Charkoff, Russia, made the following observations

Before Bath Percussion Right border 1 cm outside of right parasternal line Apex, 5 cm inside mammillary line and in fifth interspace Auscultation No audible murmur at apex, first sound distinct, slight pericardio diaphragmatic rub below lower border of right ventricle to left of epigastrium, slight accentuation of second pulmonary sound Pulse 100, not very strong The rapidity and weakness of the pulse this morning was due to springing suddenly out of bed, and to walking and talking to Dr Herrmann before the bath

After Bath Standing, and before dressing Right border 5 cm outside of *right parasternal line, and* apex 1 cm within left mammillary line Auscultation No murmur at apex Both sounds are fuller and stronger Second pulmonary a little more accented, second aortic equally as strong as second pulmonary, pericardial rub a little more distinct After walking leisurely back to room and remaining in bed for ten minutes pulse 65 and of good quality

19th Bath July 19 Dr Herrmann examined me again this morning and verified the changes in the heart noted after bath No 17 Except that the pulse is a little weaker this morning there are no ill effects from my fatiguing trip into Frankfurt yesterday Dr Herrmann examined my heart after I got to bed and pronounced the first sound prolonged but free from murmur

July 24 Am sensible of increased strength of the heart's action, its rate is not so greatly increased on getting out of bed as formerly, and walking up the gentle ascent to the Concert Garden yesterday produced no shortness of breath, only a slight feeling of fullness in the precordia, pulse rate was not very fast At Dr Schott's examination on the 21st he was astonished at the change for the better—pronounced the heart of normal size, the first sound prolonged and free from murmur

July 25 Examined again by Dr Schott last evening, found no murmur and heart of normal size, his observations confirmed by myself to-day

25th Bath July 27 Bath produced agreeable sensation of warmth, alternating with slight coolness as the current swept up along the body The heart sounds after bath intensified and clearer I feel a little bit light-headed The CO_2 was fanned away from my face to prevent inhalation Before close of bath a sensation of fullness and pressure in lower part of precordia which lasted during the walk home

26th Bath July 28 First sound at apex less prolonged and clearer than it was before bath Second aortic sound fuller and stronger

27th Bath July 29 The day was cold and rainy Less gas in water than usual, nevertheless felt as if I inhaled gas

After six baths had been taken, that is, at the end of a week's treatment, the pulse pressure, as recorded by Basch's sphygmomanometer, was 105 mm of mercury, the normal being about 130 At the end of five weeks, after balneological and gymnastic treatment, the pulse pressure had risen to 165 mm

The subjoined sphygmographic tracings explain themselves The first three were taken just before and during the first gymnastic treatment, and were designed to exhibit the influence thus exerted on the blood pressure It will be seen that tracing No 3 shows increased vigor of the cardiac contractions, but is far from being a normal tracing No 5 taken at the close of the course of treatment speaks for itself and illustrates the improvement in the heart and circulation and confirms the evidence given by the sphygmomanometer

Since leaving Bad-Nauheim, August 2, the writer has not been able to keep up the gymnastics, and his pulse is not as full and strong now as then But his heart remains normal in size, his previous symptoms have not returned, and he considers himself in excellent health He intends, however, to supplement the treatment he has had by another course of baths prepared artificially and to resume the exercises

Case 2—July 16 Male, 18 years, American History measles as child, also diphtheria Muscular (?) rheumatism in legs and especially of late across shoulders Formerly given to much swimming and to holding breath under water until head felt as if "it would burst" Fond of violent exercise Physical *examination before bath, standing*

Percussion Right ventricular border on right parasternal line, apex beat fifth space close within mammillary *line* Auscultation A pure mitral systolic murmur at apex, accented second pulmonary sound Pulse 92, regular, soft

In Bath, Spring No 7, 32° C, 2 liters "Mutterlauge" Duration fifteen minutes Pulse, on getting in 92, pulse, after three minutes, 100, and fuller, pulse, after six *minutes*, 96 full and strong as before, pulse, after nine minutes, 96, quality still better, pulse, after twelve minutes, 92, *tension* still greater, pulse, after fifteen minutes, 92

Examined immediately after bath Standing Percussion Right border 1 5 cm within right parasternal line Apex beat 1 cm within nipple line and impulse stronger Auscultation The murmur softer Second pulmonary sound stronger Second aortic sound also stronger

July 26, Bath, effervescing Duration twelve minutes Temperature 30 5° C Examination before bath Right border is a shade outside parasternal line Apex beat 1 cm inside mammillary line Pulse, standing before bath, 96, small and compressible Pulse, in bath three minutes, 104, but fuller Pulse, in bath, six minutes, 94 and full, after sitting more upright Nine minutes, 92, not quite so full and a little irregular in force and volume

In bath, palpation of apex beat detects a slight thrill and the impulse is more diffused, being extended into the sixth space and is a little less powerful Pulse, twelve minutes, 92, and full but rather compressible After bath Apex beat a little more toward the median line, and a little less pounding First sound strong and no distinct murmur

Case 3—July 21 Dr Herrmann of Charkoff Russia Age 31, no history of rheumatism, at 13 measles followed by croupous pneumonia of left apex, resolution, formerly as student drank much beer Corpulent *with* very large abdomen, except constipation no symptoms Considers himself healthy but pulse uniformly rapid, 90–96 No dyspnœa on exertion

Physical examination before bath Apex not visible, but palpable in normal situation Percussion, normal Auscultation No murmurs First sound at apex a little short and distant Second sounds of proper relative strength Pulse, standing before bath 96, soft

1st Bath Simple, saline Regular in rhythm, firmer Temperature 30 5° C *Time*, ten *minutes* Pulse after three minutes in bath, 76, after six minutes full and stronger, a little irregular in time, pulse, after nine minutes 76, pulse, after ten minutes 76, on examination after bath, heart limits were the same, except perhaps a trifle retracted on the left side, and the sounds *are* louder and fuller, especially the second

2d Bath July 27 Effervescing bath Temperature 30 5° C Time, ten minutes Pulse, before bath sitting, 88, not very strong, pulse, after getting in, 80, pulse, after three minutes, *72*, pulse, after six *minutes*, *70*, pulse, after nine minutes, 70, stronger and fuller

Pulse grew stronger and fuller, but was occasionally delayed without being intermittent The movement and speaking increased the irregularity Doctor says he has never *felt* so weak *in* a bath before He noticed, as also did the writer, a slight burning or warmth of the skin, the burning being particularly marked on the scrotum

3d Bath July 28 Effervescing bath Temperature 30 5° C Time, twelve minutes Two hours after breakfast Pulse, before bath, 92, pulse, after one minute, 70, fuller, irregular in time, pulse, after four minutes, 72, more irregular but full and fairly strong, pulse, after eight minutes, 76, more regular, full and strong, pulse, after twelve minutes, 72, quality same, more regular No sensation of weakness, that of yesterday being due, according to Dr Schott, to inhalation of CO_2 Auscultation Detects no difference in heart sounds to-day

Case 4—H H, male, 21 years History thinks he had scarlatina at 5, cholera morbus at 12, measles at 16 No symptoms but constipation and slight flatulence Physical examination Apex beat in normal situation and of good strength Percussion Size of heart normal Auscultation Sounds free from murmur and strictly normal, except undue accentuation of second aortic Lungs healthy

First observation July 27, 10 A M, two hours after light breakfast of coffee and rolls Bath, plain water Temperature 30 5° C Time ten minutes

Pulse sitting varied 88–94, a little irregular in time, rather small and weak

Pulse, after three minutes *84*, a little irregular, pulse, after six minutes 76, fuller, stronger but a little irregular in time, pulse, after nine minutes 72, full and strong

Auscultation After second bath, aortic less accentuated and all heart sounds strictly normal and loud Patient felt a *constriction* about the waist, and legs were not quite warm

2d Bath 4 50 P M, two hours and *twenty* minutes after dinner Bath, simple saline Time ten minutes Temperature 30 5° *C* Before bath, sitting, pulse, 88, fairly *full* and regular but somewhat soft In bath, pulse, after one minute 72, and somewhat irregular in time, pulse after five minutes 64, much fuller and stronger, more regular, pulse, after nine minutes 64, full, strong and regular

There was no feeling of chilliness of extremities as *in* morning Heart sounds after bath clear and strong, and second aortic rather less ringing than before

3d Bath July 28 4 20 P M Two hours and twenty minutes after dinner Thermal salt bath with 3 liters

"Mutterlauge" Temperature 30 5° C Time ten minutes Before bath, pulse 88, in bath, pulse, after one minute, 75, was irregular in time but became full and strong, pulse, after five minutes, 64, pulse, after ten minutes, 64 Bath gave no sensation of chilliness but rather one of warmth and comfort The heart sounds after bath were loud and clear

4th Bath July 29 4 15 P M two hours after dinner Bath effervescing, 30 5° C, ten minutes

Before bath, pulse 88, soft and irregular, pulse in bath one minute, 72, still, soft and irregular, pulse, in bath five minutes, 70, weak, pulse, in bath ten minutes, 65, fairly full and strong The weakness and rapidity of the pulse during middle of bath due to inhalation of CO_2 When that was fanned away from face, pulse began at once to improve,

NOTES ON EXERCISES WITH RESISTANCE

Case 5—June 30 Mr H, age 69 years, occupation, farmer history of alcoholic abuse, symptoms of cardiac insufficiency since last fall Percussion Heart greatly dilated on both sides from 2 5 cm within right nipple transversely to 3 5 cm outside of left nipple, and on auscultation feeble sounds but no murmur After exercises for forty-five minutes, right border retracted 2 5 cm and left border to a corresponding extent Pulse before 114, not much changed in rate but stronger and fuller

Case 1, Dr B (Continued)—First exercise July 1 Pulse before 68-74 Pressure 105 mm, after six minutes, 64, quality apparently better, after fifteen minutes, same, quality better, after twenty minutes 64, pressure 125 mm, after thirty minutes, 66, pressure 140 mm Percussion At twenty minutes, border of right ventricle moved inwards 1 5 cm Absolute dullness also 1 5 cm Apex before exercises was 1 cm outside of nipple, now 5 cm within

Second exercise July 2 Pulse, before, 62, after fifteen minutes, 65, after 35 minutes, 66

Apex beat before, accurately on nipple line, afterwards 1 cm inside Right border (auscultatory percussion) which was 1 cm further from median line than upon rising at 7 A M, had returned after exercise to the position of early morning, 1 cm

Third exercise, July 3 Pulse, before 80, after ten minutes, 62, fifteen minutes, 66, but stronger, after 35 minutes, 68, somewhat fuller and stronger

Fourth exercise July 4 Pulse at beginning, 84 After fifteen minutes, 69 Thirty minutes, 72 The exercises today have not slowed the pulse below 70, from 84 at beginning, consequent upon climbing the stairs Neither was the pulse rendered greatly stronger or fuller I think the resistance to the arm movements has been too great for they produce precordial distress When resistance is very slight they produce a sense of well being, and a favorable effect on the pulse and action of the heart is at once perceptible Now after a few minutes rest in bed the pulse is slow, steady, and fairly full and strong

Fifth exercise July 5 Pulse, before, 67 Pulse after fifteen minutes, 62 Pulse after thirty-five minutes, 60 When properly adjusted, the exercises give a sense of comfort and well being

Sixth exercise Pulse slowed to 64, of good volume Gymnastics have agreed with me, comfortable feeling

Ninth exercise July 9 The exercises to day agreed with me much better, owing probably to my breathing more deeply and regularly

Tenth exercise I have discovered that the fault lay, not with the exercises but with me I held myself too rigid and thereby put too great a strain on the heart To-day after I made that discovery the exercises agreed with me very well Dr Schott examined my heart this morning, and found the dilatation of the right ventricle nearly gone, the epigastric pulsation entirely gone and a systolic apex murmur in the place of the previous presystolic The second sound pure and the second aortic sound much stronger, in short the indications of a better filling of the arterial system and lessened venous engorgement

Seventeenth exercise July 17 The exercises have been agreeing with me for the last several days Can put forth considerably more resistance without feeling of discomfort in the least, pulse was rapid to day before the exercises because of much walking and climbing stairs, but has been slowed and strengthened by the gymnastics to its usual rate, 65

Eighteenth exercise July 18 Pulse before, 84 Pulse after fifteen minutes, 84, but fuller After thirty minutes, 88, but still fuller Felt comfortable, endured much more resistance, am altogether pleased with the exercises The quickening of the pulse was due to increased resistance

Twenty-second exercise July 23 Before the exercises to day my pulse was, although not counted very rapid, feeble in consequence of much unwise straining at stool, and I felt uncomfortably oppressed in the precordia After the exercises the pulse was 96, and considerably stronger and fuller and the feeling of discomfort at the heart was gone, having diminished gradually as the exercises progressed

The foregoing observations corroborate the statements made, concerning the effects of the baths and gymnastics In Case 1 it will be seen that the pulse became slowed during bath from two to fifteen, most commonly six to ten beats in the minute The only exception was in the case of the effervescing current bath, and that was probably because it was too stimulating In the second case there was no slowing of the pulse although the quality was improved This patient was not one of Dr Schott's, and the writer became satisfied from daily observation of that patient that the physician did not keep a sufficient watch of the effects of the baths, but prescribed stronger ones than the patient was prepared to take, or that there was something in his daily habits which defeated the end sought and which should have been corrected This confirmed me in the belief that patients undergoing this treatment should be carefully and frequently observed, as is done by Dr. Schott, even at the risk of unfavorable criticism. The irregularity of the pulse manifested by the two other individuals with healthy hearts is not easy of explanation, and space forbids any theorizing upon it here They serve to emphasize the effect of the baths, particularly of the saline as compared with the plain water ones The effects of the exercises are sufficiently explained by the observations noted down. That the writer's observations were so meager is a matter for regret, but it could not very well be avoided An attempt was made to record sphygmographic and sphygmomanometrical observations during the baths, but was frustrated by the inability to procure the instruments in time The assurance was given by Dr Schott, however, of such observations having been made in times past with the result of confirming the claims here set forth

It only remains to state that, inasmuch as the treatment can be carried out in this country by baths prepared artificially, and by the training of attendants to give the gymnastics, the writer has established bath rooms for this treatment Although he does not employ it to the entire exclusion of all medication he, nevertheless, is giving it a careful and extensive trial. Like all other forms of therapeutics it should not be employed indiscriminately, or by one not skilled in its use or fully acquainted with requisite details as to strength, temperature, duration, etc, of the baths And although natural waters may be preferable, as they are certainly of less trouble, he believes the results of the method will justify his faith in it, even when carried out by means of artificially devised baths

Venetian Building, Chicago

NOTE—The sphygmographic tracings on page 722 were drawn from the originals, which will account for any inaccuracies which may occur

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PRINCETON UNIVERSITY—The venerable College of New Jersey lacks little of holding the true status of a modern university It has lacked a medical department hitherto, but we are informed that a movement is now on foot to establish a medical school in connection with old Nassau Hall

OUR DIAGNOSTIC RESOURCES IN RECTAL AND ALLIED DISEASES

Delivered by request before the Chicago Post Graduate Medical School, Aug 30, 1893

BY JOSEPH M MATHEWS, M D
LOUISVILLE, KY
PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY AND DISEASES OF THE RECTUM, KENTUCKY SCHOOL OF MEDICINE, ETC

Before entering into my subject, the Faculty will permit me to thank them very cordially for the honor which this invitation confers upon me Having been a teacher in a medical college for many years, the compliment is doubly appreciated as coming from another Medical Faculty, and one, too, that is the peer of any and all others It is fit that the shoemaker should stick to his last, and I have, therefore, selected a subject for discussion to-night that may appear to you as being too simple for the occasion, but my apology is that it is the theme that has interested me, to the exclusion of others, perhaps of greater moment, for sixteen years Then, too, I hope to interest you to the extent, at least, that you will admit it of sufficient importance to be considered

OUR DIAGNOSTIC RESOURCES IN RECTAL AND ALLIED DISEASES

I believe that you will agree with the statement that a diagnosis is of equal importance to the treatment in any and all diseases Indeed, it is difficult to imagine one treating a disease correctly unless he has properly diagnosticated it What a pity it is that our schools do not give more attention to the teaching of physical diagnosis, and more's the pity that we see, every day, people suffering and dying without a proper diagnosis having been made Having given special attention for sixteen years to diseases of the rectum, it will not surprise you to hear that in that time I have met with many, very many cases that had not only been diagnosticated wrongly, but the treatment in consequence was not only incorrect, but engendered much suffering and distress, if not actually causing the death of the patient I hope that it will not be inappropriate in this connection to recite a case that has just come under my observation

A gentleman was referred to me by two well-known physicians of a neighboring State, for examination and treatment of his rectum After a careful examination, I was able to decide that the patient was suffering from a well-defined carcinoma which began about one inch above the sphincter muscle and extended as far as the finger could reach He was able, however, to have a daily evacuation of the bowels, as no strictured surface prevented, and that too with but little pain A colotomy was not authorized, and the growth extended too high to be removed Under the circumstances he was advised to go home and continue palliative treatment This he did, but I was soon notified that he had fallen into the hands of other physicians who advised him to go to another city for treatment Upon his arrival there, he wrote back to his former physicians saying that the surgeon said that he had seven large piles, and that after they were removed he could return home in ten days a well man The operation was done and he was buried the following Monday

Either the surgeon s diagnosis was wrong or he greatly deceived his patient It has occurred to me several times to operate upon patients for cancer of the rectum where a diagnosis of piles had been given Generally I have attributed the mistaken diagnosis to the fact that the physician did not make an examination, but in one instance, at least the physician had ligated a portion of the cancerous mass, mistaking it for a hemorrhoid It is no uncommon thing for a surgeon who does much rectal work to see cases of hemorrhoids, diagnosticated as prolapsus ani, or vice versa, benign ulceration of the gut, designated as malignant, or the reverse, a contracted, spasmodic sphincter, called a stricture, a retroflexed womb, made out to be a tumor of the rectum, or an enlarged prostate, called carcinoma Nor is it a surprise to the surgeon to have cases referred to him as rectal, when in truth the trouble is a urethral or meatic stricture, or it may be a displaced ovary or pus tube It has happened to me to see three women who had submitted to an ovariotomy, whose symptoms failing to clear up, had their trouble explained by detecting disease in the rectum or flexure One woman was sent to me to have a large rectal tumor removed, when upon examination it was found that she suffered from a displaced uterus only I have reported two cases of hypertrophied prostate, diagnosticated as piles It is only necessary to refer to the fact that every day patients present themselves to the family physician for advice, having been informed that it is most important that they have some rectal "pockets" removed, which are slowly but surely endangering their health and mayhap their lives Nor need I tell you that a great operation has been discovered, invented or found- truly national in character, called the "American" operation, which promises relief to the afflicted of whatever kind

It is upon the supposition and the fact that these things are true, that I have selected my subject for this paper True, you may say that such mistakes can only be made by ignorant men or pretenders If your statement is true, then I will insist that much of your duty lies in the protection that you can or should give your clientéle But my experience has taught me that your opinion is not altogether correct, if I am to anticipate it in the words already expressed Many in the profession look upon the rectum as a fathomless pit and often let its affections go by without investigation, and many irregulars seeing this have been quick to see the chance and profit by it and enrich themselves That they have made grave mistakes in practice, we can all attest, but it is our duty to correct the evil and not condone it The main object, then, of this paper is to try to draw your attention more definitely to the importance of making a correct diagnosis in all rectal and allied diseases By allied diseases is meant affections of other organs which, by continuity or contiguity with the nerve system as a medium of reflex, show symptoms through the rectum, but which in reality have their seat in other organs One of the most harassing cases that I have ever met was that of a woman who gave the most pronounced symptoms of neuralgia of the rectum yet no relief was ever afforded her until the coccyx was removed You will agree with me that the rectum is the seat of many diseases Hemorrhoids, both external and internal, affect the young, old and middle aged Cancer finds the rectum a favorite seat and syphilis attacks it, often completely obliterating and destroying it A simple fecal impaction of the flexure or rectum may kill, if not diagnoticated, and many have lost their lives from hemorrhage from a capillary pile Proctitis has often been mistaken for dysentery, and an ulceration (simple) in the sigmoid flexure, called cancer and left alone You will permit me to try to clear up some of these, at least, in a diagnostic way

METHODS OF EXAMINATION

It is not at all necessary to have much paraphernalia, or many instruments, to make a rectal examination With the finger and a good light, either artificial or natural, all, or most all rectal affections *can be made out Speculæ are generally cumbersome* and do but little good, besides they are extremely painful to any diseased rectum Indeed, I can not recall any rectal affection that can not be made out by the finger's touch, except one, when in reach of the finger The exception is the one most commonly believed to be the most easily diagnosticated by the finger I allude to internal hemorrhoids Unless hypertrophied and made solid by plastic infiltration during an inflammatory attack, or hardened by atrophic change, they can not be *felt* when within the rectum, and indeed I have often thought that internal piles that did not protrude, needed but little if any attention, unless it be the ligaturing of a small bleeding tumor that was wasting the body by hemorrhage If you will run over the list of rectal affections, I think that you will sustain me in the position that by touch alone, they can be diagnosticated Polypi are easily detected, a stricture is readily felt, an ulcer quickly recognized, cancer, self apparent, syphilis, clearly traceable, fistulæ, external or internal, clearly seen or felt, an irritable sphincter responds quickly to the touch, and hemorrhage plainly seen, the prostate gland fully within reach, its anatomical bearings easily demonstrated and its pathology made manifest, pressure upon the rectum by a displaced uterus, quickly told, a fallen ovary generally within reach, a prolapsus ani seen without difficulty when extruded, an impacted fecal mass just within the sphincter easily felt Of course, for determining a proctitis or other inflammatory condition in the rectum, a speculum examination is necessary When natural light is not attainable, the electric small globe is an excellent substitute or the use of head mirror with Argand burner, as used by Kelsey, Cook and others, subserves the purpose well The position of patient for rectal examinations should be either Sim's, on left side to gravitate contents of abdomen toward diaphragm, or on the back with knees held by Clover's crutch

ANATOMY OF THE RECTUM

The anatomy of the rectum must be taken into consideration in a diagnostic way It is not my intention to enter into a description of its minute blood or nerve supply, but I would call your attention to the fact that it is abundantly supplied with each Its vascularity predisposes it to inflammatory changes and its large nerve distribution accounts for many reflexes I am firmly convinced that if the gynecologist and general surgeon, as well as the practitioner of medicine, would oftener look to the rectum as a source of reflex trouble, many vague troubles would be cleared up and many patients benefited thereby I do not wish to be understood as advocating any wholesale or unwarrantable "*orificial* surgery," but simply to call your attention to actual diseased structures when they exist I believe that when there is a structural change or a true pathological condition existing in the rectum, such condition may be the means of reflecting symptoms to neighboring or contiguous parts, but I do not believe, nor can it be substantiated that even if such change is found, it is, or can be, responsible for the many diseases that some hold and are, and that can only be, produced by an actual pathology in the parts affected Dyspepsia, asthma, eczemas, neuralgia, etc, have a true cause, outside of any orificial conditions, and the short-sighted physician or surgeon who is lured into the belief that operations upon these outlets of the body will be of any benefit, will make a woeful mistake and inflict, perhaps, an irreparable injury upon his patient In this connection I shall be permitted to insert a letter apropos to the subject, lately addressed to me by one of the leading physicians of Kentucky

"I write to know what this new surgery is that warrants the cutting out (or off) of several inches of the rectum for some supposed or trivial affection. Two men came to our town a few weeks ago and operated upon a young girl (a friend of mine) who is, or was, in perfect health, save a little rectal irritation The operation consisted in cutting deep down into the cellular tissues, and removing a ring and attempting to unite the upper and lower segments by first intention Of course it was a failure This was done five weeks ago It is now healing by granulation and a stricture has resulted, for which dilatation is now being practiced"

If this whole subject were not really serious, it would be ludicrous, but inasmuch as unscrupulous individuals are playing upon the innocence or ignorance of the public, and by their pretense inflicting great damage and unknown distress, it behooves us as physicians to warn them at least of the danger I am glad to add that this uncalled for and outrageous procedure has been, and is being denounced by all good surgeons

Last Sunday I operated upon a very prominent minister from Texas, the object of the operation being to restore, if I could, a sphincter muscle that had been destroyed by the so-called "American" operation He told me that he was a subject of asthma and had been advised to go to an institute in Chicago for treatment The treatment (?) consisted of the removal of several inches of his rectum, and a circumcision A stricture of the rectum followed the excision and he was anesthetized three times, and that cutting, breaking, etc, was practiced Upon his discharge, or quitting the institution, he found a perfect inability to control his actions This gentleman is in a deplorable condition, his occupation gone and he expressing a preference for death to the condition he is in

In a late edition of the *Journal of Orificial Surgery*, published in this city and edited by a gentleman of rare ability, I find these remarks "Orificial surgery is searching in its action, the effects of the work not only reach out to physical disorders but influence profoundly the state of the spiritual man, as by its aid the lame have been made to walk, the blind to see, the asthmatic to breathe, the dyspeptic to digest, the neuralgic to enjoy a relief from suffering and so on through the list of chronic ailments'

So we are to infer, from so distinguished an authority as the originator of orificial surgery, that all chronic conditions, wherever found, are directly traceable to the orifices of the body Our text-books then go for naught, our pathology all wrong, physiology but a myth, and great authorities have written in vain If you have witnessed the surgery done upon one of the outlets of the body, viz the rectum, and have watched the results as I have in many cases, you will confess that the remedy is much worse than the disease, even granting that the disease was cured I speak now more especially of the chronic ailments of the body, said to have been treated by the operation upon the orifice where no actual disease existed Surely these men do not know of the great amount of harm being done by the disciples of such a doctrine The orificial operation, or the so called "American" operation, upon the rectum, consists in the removal of an inch or more of the mucous membrane of the gut, a modified Whitehead's operation It is tedious of execution, attended with much hemorrhage, the effort to stitch the membrane to the true skin is often futile and the result in many cases an extensive proctitis, an ulceration, or a decided stricture, not to speak of incontinence, which follows the operation I have many letters giving these results, and have had scores of cases under my observation suffering from one or all of these calamities I therefore maintain that the operation is unwarrantable and untenable, and would respectfully call your attention to it for a full investigation In a diagnostic way, I do not believe that the so called "pockets" or papillæ have any significance whatever, as they have been demonstrated by Prof Edmund Andrews of this city and other learned anatomists and surgeons, to be the rectal pouches (sacculi Horneri) and are normal structures If, then, it is objectionable to remove these by clipping, etc, how much more unreasonable it is to remove an inch or more of the normal gut for the relief of chronic affections, as dyspepsia, asthma, etc Kelsey says in the *Manual* for 1892, that whole opera companies are admitted into this same institution and subjected to the "American" operation for the purpose of improving their voices

REFLEX IMPRESSIONS FROM THE RECTUM

No one will deny that impressions upon other organs are received from the rectum by reflex action This fact has been abundantly attested by the profession and many articles have appeared on the subject lately It has been upon this hypothesis, doubtless, that the "orificial surgery" idea originated That there is some foundation in fact for the theory advanced must be granted, but much false reasoning has resulted in many unwarrantable surgical operations, which have resulted disastrously to the patient

To have reflex action in any case we must have certain and well-defined conditions They are viz *a*, afferent impressions resulting from the influence of a foreign body, or a pathological state, such as inflammation or ulceration, acting as an irritant upon afferent nerves, either in some part of their course or in their peripheric sites of distribution, whether such sites be situated upon the external surface of the body, or upon some part of one or another of the mucous surfaces within the body Thus it happens that the determining cause may be associated with painful impressions, though in some instances such impressions may be more or less absent Worms in the alimentary tract of the child, are just as likely, or more so, to excite to a spasmodic condition (general) than an affection of any outlet or orifice of the body The second essential in producing nerve reflex is, *b*, that the afferent impressions (painful or non painful) produced by the irritant or pathological state, should pass from the nerves conveying through them a related nerve center which, from one or other cause, chances to be in a state of exalted activity, and *c*, thence be reflected along one or other set of afferent nerves, so as to produce effects of this or that order As afferent nerves are distributed to glands and to muscles (both involuntary and voluntary) reflex phenomena may show themselves in one or other of the two principal directions

1 By the modification of the quantity or quality of some secretion

2 By the production of spasmodic contraction in certain muscles, either of the involuntary or voluntary type Under this process of reasoning, it can be easily comprehended how headaches, neuralgias, etc, can originate from an incoordination of the muscles of the eyeball, or an ugly ulcer in the rectum, especially one embracing the prostate, could make manifest symptoms of cystitis But it must not be forgotten that the one essential to a reflex action is a pathological condition Disease, or a change from the normal must exist, such as long continued irritation, congestions, inflammations or ulcerations

At the meeting of the Ninth International Medical Congress, held at Washington, September, 1887, I had the honor to read before the Section of Anatomy, a paper entitled, "The Anatomy of the Rectum in Relation to the Reflexes" Up to that time, very little had been written on the subject, and the further I have pursued the subject, the more convinced I am of its importance, but we must not lose sight of the fact that our premises and conclusions must be based upon strict anatomical and scientific grounds I will not bore you by attempting to give the anatomy of the rectum, but will make it suffice to say that a diagram of its nervous distribution is easily studied, its anatomical relations plain to understand and its pathology quickly recognized With these to guide us, a diagnosis based upon a clear understanding of disease can be made out I therefore regard the anatomy of the rectum, in relation to the reflexes, of the very greatest diagnostic value Especially should it be borne in mind that, 1, disease and local irritation must exist in the rectum, 2, there must be an afferent nerve fiber, 3, a transferring center, and 4, an efferent nerve fiber, forming a reflex arc

From the nerve supply of the rectum, it can be easily seen that pain would be manifest over the sacrum and coccyx in rectal disease If disease is limited to the lower part of the rectum, the patient will complain of pain at the end of the coccyx If disease is in the central part of the rectum, the pain will be in the center or lower part of the rectum, and when the disease is in the upper part of the rectum, the reflex will be in the upper part of same, in the innominate arch, etc The location of the reflex, therefore, will indicate the part of the rectum involved, demonstrating that the nerves to any part of the rectum and to the posterior surface of the vertebral column opposite these, are given off from the same point in the spinal cord, bearing the same relation as the nerves to a muscle and the skin over it

Bearing in mind these facts, and also recognizing that by contiguity as well as continuity of structure, we can get a reflex impression, many vague conditions can be cleared up in a diagnostic way In the male we are to remember that the prostate gland, bladder, urethra, inguinal gland, and in the female, the bladder, urethra, uterus, vagina, ovaries and tubes, are especially affected by pronounced rectal disease

In this connection I will call your attention to the external sphincter muscle, as a factor to be considered in making a diagnosis of rectal disease, and also of its importance in a reflex way My attention to this muscle as a factor in constipation, was first called by Dr Rich O Cowling, deceased sixteen years ago, then Professor of Surgery in the University of Louisville He believed that many cases of chronic constipation could be relieved by the free divulsion of this muscle He, however, had never practiced it Upon his suggestion, I tried the plan upon a few patients that would permit it and reported the favorable result to one of the medical societies In the operation for internal hemorrhoids, I always precede it by a free divulsion of the muscle Many cases that have suffered from the constipated habit have been relieved by the operation, and I have attributed the relief more to the divulsion of the muscle than to the removal of the hemorrhoids It can be readily seen how this muscle could in a mechanical way interfere with the act of defecation, and in a physiological way prevent the peristalsis of the bowel which it greatly controls It frequently becomes hypertrophied by the inflammatory process, and hence is not only easily irritated itself but irritates, when in this condition, all the other contiguous parts The nerve supply of this muscle is greater than that of any other muscle of the body, which accounts for its great disposition to reflex action The nerve supply coming from three different sources gives it a clear relation to all the neighboring parts I have known a simple spasmodic action of the muscle to give rise to symptoms closely simulating proctitis, prostititis, cystitis and in a few cases urethritis, not to speak of reflected back ache, thigh ache, etc

Children often suffer from a constipated habit, accompanied in many instances by extreme pain The cause of such condition is often overlooked, and we are much indebted to Dr Morton of St Joseph, Mo, for an article entitled, "Fissure in Infants," as an overlooked cause of distress in the infant The fact that such cases frequently existed was attested by Drs Jacobi, Sadtler and myself, and the importance of their detection is shown in this valuable paper

THE IMPORTANCE OF RECOGNIZING DISEASE IN THE SIGMOID FLEXURE

For a number of years I have been investigating disease in the sigmoid flexure, and have recorded much of my experience in my book on "Diseases of the Rectum, Anus and Sigmoid Flexure," recently published Much depends upon the early diagnosis of such cases From its anatomical construction and situation, it is easily seen that disease there would be much more serious than in the rectum Total obstruction can much more readily take place and the results prove much more disastrous than from like disease in the rectum Any pathological condition, from a simple congestion to a malignant growth, may affect the flexure If early detected, a congestion or an inflammation, can be easily abated, and yet if left alone or undetected, result in structural change such as ulcerations, strictures, etc, which renders the chance of cure very slim The sigmoid has been successfully removed for cancer But the success of treatment of disease here, either benign or malignant, depends entirely upon an early recognition

I shall not enter into detail to prove that the flexure is a common seat of disease, but will take it for granted that it is acknowledged Nor will I but simply suggest that it is but too infrequently treated, for to this fact, too, you will attest Of the importance of an early diagnosis and treatment, I am sure you are convinced The books are singularly silent as to both It is a very common thing for all irritation in the flexure, either from congestion, inflammation or ulceration, with its coincident discharge and symptoms, to be diagnosed as diarrhea, dysentery, chronic catarrh, etc, and treated generally per mouth, when a proper recognition of the trouble would reverse the order of treatment and by a few injections into the flexure would relieve I will make it suffice for illustration to give you the last case of the kind that has fallen under my observation

Mr J, aged 28, of full, robust habit was referred to me by his attending physician with the statement that the patient was suffering from a diarrhea, or dysentery, which he was unable to control after a treatment of four months Upon questioning the young man, who was a civil engineer, he related that his trouble began about five months previous while out on the road, not violently at all but as a moderate looseness of the bowels, accompanied with some straining at stool The discharge had never been watery but had always contained some mucus and blood Although it would appear that this was characteristic of dysentery he had never had an abnormal temperature nor had his appetite been interfered with, though he had not indulged it In four months he had lost forty pounds of flesh and was growing weak He complained of pain in the left side over the flexure, which was aggravated by pressure An examination of the rectum revealed but little, yet as a rectal bougie was introduced into the flexure, pain was excited at its point, a disposition to tenesmus, and a desire to go to stool The proper local treatment was given the flexure and the trouble disappeared in ten days

I shall make it suffice to give the classification of disease found in the flexure, with the most important points looking to its proper diagnosis There are two points that I would especially call your attention to in considering inflammation of the intestine 1, the surface of the membrane will be more or less covered with a viscid, glairy mucus, containing pus and imperfectly formed epithelial cells, which may frequently be voided in the form of complete coats of the tube, 2, it is unusual for a chronic inflammation of the intestine to exist in adults without coincident ulceration These two points will aid us materially, especially in differentiating between benign and malignant troubles of the intestine

The following pathological conditions are found in the flexure 1, congestion, 2, inflammation, 3, simple ulceration, 4, specific ulceration, 5, malignant ulceration or growths, 6, stricture, either malignant or non-malignant, 7, tuberculous ulceration It is of the utmost importance to diagnosticate each of these, and yet it will often prove to be a difficult thing to do. For instance, if a simple ulceration be mistaken for a malignant one, the proper cure or treatment is not likely to be afforded and, vice versa, if a malignant ulceration is mistaken for a benign one, time is given for such inroads as would render an operation useless.

Again, it is very necessary to recognize the difference between a *specific* ulceration, and that which is either benign or malignant, in order that the constitutional symptoms could be rapidly met. You will permit me, therefore, to devote a little time to giving what I consider some essential points in differentiation.

Congestion.—A distinction should be made in a pathological way between a congestion of the flexure and an inflammation, for the former can be relieved, when recognized, before the phenomena of inflammation has taken place. In other words, as soon as the irritation, which causes the distension of the blood vessels is removed, a normal condition is immediately assumed, when, if the inflammatory product is already thrown out, time must be given for its re-absorption. The symptoms attending a simple congestion of the flexure are very like those of an ordinary colitis, the only difficulty being to decide what part of the colon is affected. Very often a discharge of mucus alone, with or without a disposition to tenesmus, accompanied with slight pain over the flexure, is our only guide. A very simple local treatment quickly relieves these cases. I have seen patients discharge as much as six ounces of mucus a day from this simple condition.

Inflammation.—When a congestion has existed for a sufficient length of time to allow of plastic change, the condition is much more serious and difficult of cure. The symptoms are more marked, viz. those of reflex such as pain in the back, colicky pains in the stomach and bowels, often a localized sensation over the left inguinal region, a *great* amount of flatus, diarrhea, sometimes constipation, straining at stool caused by the feces passing through the inflamed flexure. The discharges often assume a dysenteric character, though not so apt to as when the flexure is ulcerated. These patients count themselves invalids and are often treated for chronic dysentery, though no rise of temperature is apparent. The most frequent cause of this condition is constipation, as the physiology of defecation will demonstrate. After the re-absorption of the watery constituent of the fecal mass takes place, the remaining dry mass acts as a local irritant which brings about the structural change with the coincident symptoms.

Simple Ulceration.—It requires but a step from the inflammatory stage for the changes of ulceration to take place. Indeed, whenever an abrasion takes place in the mucous membrane, the process rapidly advances. It is a much more serious condition than either of the other two, for it represents in ratio the third state of the inflammatory act or, more properly speaking, is the degenerative stage of the plastic deposit. As a result, not only do strictures form when an effort at repair is made, but the tissues may give way and perforation take place. It invites impaction and the reverse may be true, that impaction may be the cause. My experience is that impaction oftener takes place in the flexure than in the rectum and is much more dangerous.

The symptoms attending the ulcerative process in the flexure are plainly visible. In the congestive or simple inflammatory stage, the reflexes are perhaps mild, they are now well marked, the pain was slight, it is now well established, the discharge was principally mucus, it is now muco-purulent and bloody, the actions then infrequent, now frequent. There is great straining at stool and after each action a feeling of exhaustion, the desire for an evacuation constant but often nothing passes except large quantities of gas. The bowel never feels emptied, an uneasiness always in the abdomen. This condition of affairs leads the patient and often the doctor to suspect malignant trouble, as a rapid waste of flesh takes place and a bad color results, or perhaps a chronic catarrh is diagnosticated and the ordinary treatment given which accomplishes no good. By proper and careful local treatment of the flexure, the disease yields rapidly and kindly.

Malignant Ulceration.—The rules laid down for diagnosticating cancer are generally so explicit that the student thinks there exists but little difficulty in coming to a quick and correct conclusion, but the surgeon of experience admits that it is often a difficult problem to solve. The so-called infallible symptoms fade away as observation leads one to consider them. The disposition to bleed, the peculiar burning, or radiating pain, the odor which by some is said to be pathognomonic, each and all of them may be found absent, and the verdict after all has to be made up by the study of the clinical facts in the case. Even the reliable aid of the microscope on which many rely, will be found futile in the effort to decide the knotty question. Heredity, which many have so earnestly advocated and which is so generally believed to play its part in the affection, will be found of but little value to us in forming an opinion, and yet it is a life and death issue literally that faces us. If, then, these difficulties surround us in making out a malignant growth, when the trouble is plainly in view, how much more difficult is the problem when malignant disease is located in the sigmoid flexure and away from sight. That it is a favorite site for cancer no surgeon denies, and with the examples set us by such men as Bull, Lange and Bacon, we realize the necessity of an early diagnosis, in order that the flexure can be removed, for upon surgical treatment alone can any hope of a cure be based, when cancer exists in the flexure. The symptoms of malignancy in cases of this kind are very vague and misleading. The very best surgeons have made mistakes in this direction. It has not been many months ago since a gentleman in an interior town of Indiana consulted me for some supposed bowel trouble, and I gave the opinion that the disease was in the sigmoid flexure and would be the cause of his death. This opinion was concurred in by Dr. G. J. Cook who had seen the case some weeks prior. A short time thereafter, he consulted one of the most eminent surgeons in this country living in Chicago, who assured him that no such condition existed and that his trouble was largely imaginary. The patient died in a short time and an autopsy revealed a cancer of the flexure that had perforated into the cavity. The following cut represents the tumor removed by an autopsy made by Dr. Cook which verifies the opinion of Dr. Cook and myself in the case.

I contend that by palpation and the ordinary external methods of examination, a tumor can not be diagnosticated in the flexure in a person who has a large abdomen if, indeed, it can in the ordinary sized abdomen, and that, granting a tumor *could* be made out, no significance could be attached that would indicate its nature except upon suspicion As apropos to this subject, let me, at the risk of tiring you, relate a case that I saw with two able physicians not long ago

The patient was an able-bodied German about 40 years of age, suffering from a total obstruction of the bowels From the history of the case, his physicians had ruled out *acute* obstruction or intussusception, but they were unable to locate the point of obstruction I suggested the administration of an anesthetic, and that I might be permitted to introduce my hand for diagnostic purposes This was agreed to, and when the man was fully anesthetized two fingers were first introduced through the sphincter, then four, and finally the whole hand, the muscle plainly giving way Pushing my fingers to the entrance of the sigmoid, I detected a well-formed cancerous growth which filled the flexure and nearly obstructed the opening An immediate laparotomy was advised and was done The two points which I wish to impress are 1, that it was impossible to make a diagnosis here by external means, 2, that by the introduction of the hand it was quickly determined In many cases, therefore, I believe that this procedure should be practiced When we remember that cancer in the sigmoid may be so insidious as to be fatal without presenting but few, if any, of the ordinary symptoms of the disease, often the only symptom being obstruction, I believe that the introduction of the hand is the only means by which a correct diagnosis can be effected It might be suggested that the rectal sound tube, etc, might accomplish the same purpose, but when it is remembered that an obstruction in the flexure can occur from other conditions, as impacted feces, foreign bodies, etc, it takes the *feel* or touch to determine the question

Malignant tumor found in sigmoid flexure

Tuberculous Ulceration, and Stricture of the Rectum — I know of no disease or condition of the rectum that is more serious or that calls for a more decided diagnosis than does ulceration with consequent stricture Much has been written on this subject and many of the points involved are yet mooted In the general address on surgery, before the American Medical Association in 1891, which I had the honor of delivering, this was the theme selected As my views expressed in that paper have received some criticism you will permit me here to make some reply, as the questions involved are mainly diagnostic ones

It is no difficult matter to diagnosticate a stricture of the rectum, in the vast majority of cases it can be felt, for it is generally within reach of the finger But granting that the upper part of the rectum is strictured and not the lower, instruments can be used for the detection, which is, however, seldom necessary But it is a very difficult matter to tell the cause of said stricture, or to diagnosticate between the conditions set down as causes of this trouble I did not in that article, nor do I wish now to appear dogmatic, but you will, I hope, allow me to express an individual opinion, even if it does differ with some of the authorities The article objected, first, to the classification of stricture as given by some authors, as for instance I believed that "spasm" as a cause should be ruled out If such condition ever exists which is to be doubted, it was merely from irritation and had no pathology of stricture in fact

2 That congenital stricture should be classed as atresia, for the idea to be conveyed in writing of stricture is to deal with a pathological change of tissue

I said that although it is frequently stated that dysentery is a common cause of stricture of the rectum, I had never seen a case of sufficient worth to convince me of the truth of the statement or, indeed, that it was a cause at all To substantiate this belief, the following statements were adduced Prof John A Ouchterloney, a distinguished pathologist and teacher, in discussing the subject said "I call to mind a dead-house experience extending over many years During the war I made postmortem examinations upon hundreds of cases who died of dysentery, the most malignant form of the disease as all will attest whose observations extend back to war times, and I can not remember to have ever seen a stricture of the rectum as the result of dysentery In the two hospitals to which I was pathologist, there were eleven hundred and fifty beds and we sometimes made as many as five or six postmortems a day After the close of the war I was for many years pathologist to the City Hospital, but in all my dead-house experience I never saw a stricture of the rectum caused by dysentery"

In dealing with dysentery as a so called cause of stricture, I said that an ideal case for a pension would be when a soldier could show a stricture of the rectum, the result of dysentery contracted during war, and incidentally remarked that the Pension Office was singularly silent on that point. After writing my address, I noticed in the "History of the War of the Rebellion" that Surgeon General Woodward said: "Stricture resulting from dysenteric ulceration seems to have been much rarer than might have been supposed, and that *no* case has been reported at the Surgeon General's office, either during the war or since. That the Army Medical Museum does not contain a single specimen, nor had he found in the American medical journals any case substantiated by postmortem examination, in which this condition is reported to have followed a flux contracted during the Civil War."

Again, if dysentery is the common cause of stricture that some say it is, why is it that it is not more commonly met in people who have suffered with the disease in warm climates where dysentery is very common, indeed often epidemic, but how many cases of stricture of the rectum have ever been reported in this class by physicians who have had the opportunity of watching their cases for years? It might be suggested as a point in the etiology of stricture that dysentery does not, as a rule, expend its force in the rectum, but in the colon. If this be true, why is it that we do not have the *report* of cases of stricture in the colon, the result of dysentery? Whenever the effect of inflammation is expended in the intestines, it affects mainly the mucous membrane and not the submucous tissues. I submit, then, that these evidences are quite sufficient in my opinion, to make us careful in forming a diagnosis of stricture, especially in regard to its cause, as not only the treatment depends upon it, but also the life of the patient perhaps.

In the classification of stricture of the rectum, given by some, it is claimed that tubercle plays a prominent part. That we meet with tuberculous ulceration of this portion of the gut must be admitted, but it has not been my experience that a coincident stricture follows. The disposition of tuberculous tissue everywhere is to break down, and before the capacious rectum is filled by such deposit as to constitute a stricture, it will have assumed the ulcerative stage and given way. The only way that such tissue could originate a stricture, in my opinion, would be by cicatrization and such cases are rare, to say the least of them. In no instance have I ever seen a stricture of the *bronchi* from tuberculosis, and yet we recognize this as a favorite seat for tuberculosis. I regard the disease of but little diagnostic value in stricture of the rectum. The tubercle bacillus can, of course, be detected by the microscope.

Syphilitic.—By all odds the most common cause of stricture of the rectum is syphilis, not caused by direct inoculation or the extension of chancrous pus into the rectum, as formerly believed by some, and still believed by a few, but by a gummatous deposit, constituting a rectal syphiloma. Indeed, so well convinced am I that this is the method in which syphilis shows itself in the rectum that I have doubted whether chancrous pus ever caused a stricture of the rectum. Granting that such might originate a stricture, it could only occur by infecting the region of the anus and constrict by cicatrization of the sore. This would not be a syphilitic stricture of the rectum in fact. Therefore, as a point in diagnosis, it must be affirmed that the constriction is due to secondary, not primary causes. My table of cases demonstrates that as much as 50 per cent. of strictures are due to syphilis. Dr. Straus, an eminent surgeon of St. Louis, says that the hospital reports of St. Mark's agree with this statement, he having lately examined said statistics.

Cancer is, undoubtedly, the second greatest factor in producing stricture of the rectum. I have never said, as has been attributed to me by one authority, that outside of syphilis and cancer, there could be no other cause of stricture of the rectum, for in my book on diseases of the rectum, I distinctly say that any irritation sufficiently long continued as to excite to a marked proctitis, especially with ulceration, might eventuate in a stricture, and cite several cases. But I did affirm, and do now reiterate, that these cases are rare compared with syphilis and cancer as causes. I did *not* say that if a case presenting, did not have cancerous stricture, that it was of necessity of syphilitic origin. What I did say was, that in a case presenting, if the question involved was whether the stricture was caused by cancer, and if it was decided that it was not malignant, then that ninety-nine times out of a hundred, it would prove to be syphilitic. Why? Simply that there is no stricture produced by other causes than syphilis, that resembles in the least a cancer stricture. Certainly then, trauma, simple inflammation or even dysentery do not in the least resemble a malignant or cancerous condition, while syphilitic stricture is so closely allied to cancer in its clinical aspect that it is often mistaken for it. Hence I said that if it was decided not to be cancer, in the majority of cases it would prove to be syphilitic and not a stricture from other causes, which is far from saying that if stricture was not cancerous, it was syphilitic. Therefore, I deem it of the utmost importance to be careful and positive in your diagnosis of a rectal stricture, for if the condition be diagnosticated malignant, when benign, you have greatly wronged and terrorized your patient; if a diagnosis of syphilis has been made when the stricture is due to other causes, I quite agree that a stigma may be passed upon an innocent person, but if you should diagnose a syphilitic stricture as a simple one, you will leave undone that which might wreck the life of a good man or an innocent woman. But I would rather err on the side of truth and if the truth hurts, you have but done your duty. No man believes in sentiment more than myself, but when sentiment comes between deception and truth in the prosecution of my professional duties, sentiment must get behind.

If I have given you any one point in your diagnostic resources of rectal and allied diseases, that is worthy of your consideration, and that may be of benefit to one single afflicted person, I am fully repaid.

FOUNDS A STATE MEDICAL LIBRARY.—Dr. Robert Battey of Rome, Ga., has presented to the State about 1,000 valuable medical works from his private library, asking that they be made the nucleus of a medical reference library in the State Capitol in Atlanta, the State's need of which he has often realized during his professional career.—*Chicago Tribune*.

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Having had an opportunity recently, of seeing quite a number of colotomies performed at St Mark's Hospital, London, I thought it would not be amiss to record my observations of some of the most important cases which I deemed worthy of consideration

the preparation of the patient, if time allow, it is practicable, the bowels are relieved by ns of purgatives and enemas, as this frequently ates the necessity for the immediate opening of gut From twelve to twenty-four hours prior to operation, the same preliminary preparation of skin is made as for other abdominal incisions an antiseptic dressing applied over the field for eration Whenever there are no contra indications, chloroform is the preferred anesthetic, not that it is considered safer than ether, but because of many advantages afforded during the operation, for with it there is greater muscular relaxation, less frequency of respiration and tendency to cough than with ether, hence, the work is facilitated to that degree Again there is not so much hemorrhage from the small arteries and veins Mr Richard W Lloyd, the anesthetist, said to me, that he *red* ether, but that in abdominal surgery, he ften commenced with ether and found it neces- to change to chloroform Whenever ether is en, Clover's small apparatus is used for its administration, and, as a rule, it is preceded by a few inhalations of gas For chloroform, from fifteen drops to a drachm is sprinkled upon a piece of folded lint, about the size of a closed sheet of note paper, which is then held six or eight inches above the face during several respirations, and gradual brought nearer, until it forms a kind of dome the mouth and nose, the edges falling lightly the face, more chloroform being sprinkled upo lint from time to time, previously to its being tu over Patient's chest and legs are covered blankets, over these a mackintosh and over sterilized towels

Left inguinal colotomy being the most frequ performed, I shall treat of it first In this opera an incision two inches long and about one in the inside of the left anterior superior spinous cess of the ilium and parallel with Poupart's ment is made through all the abdominal struc down to the peritoneum All bleeding being stop the peritoneum is then divided and secured a clip on either side, to prevent its being pus away, and a small flat sponge, having a str attached, is now thrust into the abdominal cavi to keep the intestines out of the way, and to ca any blood that might escape into the abdomin cavity while the parietal peritoneum is bei stitched to the skin The spong withdraw and a loop of the sigmoid is brou ugh th opening and, when advisable, cont th ntestine out from both the upper l f the incision until each end is eedle threaded with carbolized silk through the mesentery one-half inch behind the bowel, midway between the upper and lower angle of the incision, back through the mesentery, then through a fold of skin, on the outer edge of the opening, and tied (Allingham) Cooper, Edwards and Goodsall pass the mesenteric suture through the skin, parietal peritoneum, mesentery, parietal peritoneum and skin, then back through the same structures and tie The prominent piece of gut, outside of the abdomen, is next made fast to the skin by five or six sutures, care being taken not to pass them through the mucous membrane of the bowel The gut is then dusted with iodoform, green protective applied, and over this gauze, then a large pad of cotton and a broad, many-tailed flannel bandage completes the dressing

The patient is then placed on his back in bed and, if there are no contra indications, with his head low and a pillow placed under his knees Opium is given if pain is very great, or severe diarrhea begins A soda and milk diet is given for the first day or so, and if the patient is very weak, a little whisky is allowed After the bowel has been incised fish, toast, etc, is added On the second or third day, or earlier if necessary, after the operation, an incision one inch and a half or two inches long is made in the intestine to permit the gas to escape, and on the following day an aperient is given In about a week or fortnight, the bowels having been well emptied, patient is again chloroformed and the supplementary operation completed, which consists in removing the excessive gut

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Case 3—S S, age 64 years Constipation for twenty-five or thirty years For the last six years has had occasional pain in the right side and groin Two years ago noticed that blood was mixed with her motions She now complains of incessant teasing diarrhea, great straining, and never obtaining relief during defecation Examination revealed a movable tumor, with elevated edges springing from the left side of the rectum, which the finger passed well beyond May 9 Mr Cooper began left inguinal colotomy Failing to find the sigmoid cold water was injected into the rectum, when it was noticed that it passed into the right iliac fossa The water was withdrawn, the opening in the left side closed, and an incision made in the right inguinal region, where the gut was readily found which was, presumably, the malplaced sigmoid Patient was very restless during the night following the operation, retching, vomiting and complained of severe right abdominal pain

May 10 Dressing removed, gut being very much distended, was immediately opened and a great quantity of flatus escaped May 11 Supplementary operation performed This colotomy was done preparatory to an excision but being so well pleased with the result she refused to have anything further done, and was discharged June 10 relieved

This case is of special interest 1, because of the abnormality of the sigmoid, 2, because some authors maintain that, prior to an excision of the rectum a preliminary colotomy is an important factor and very necessary to the welfare of the patient, while others would excise at once

Lumbar colotomy is not nearly so frequently performed in the Allingham school (if I may be allowed the term) as the inguinal operation, however, it is done whenever indicated The following case, because of the completeness of the obstruction, the great distension of the intestines and the necessity for the immediate opening of the gut, was considered a typical one for the operation

Case 4—Patient, age 52 years Average weight less than ten stone On admission into St Mark's was found to have a large cancerous mass, completely blocking up the rectum Abdomen greatly distended having a "doughy-like" feel, and outlines of the intestines could be seen and mapped out over it in several places He measured thirty six and one half inches around the abdomen at umbilicus, four and a half inches above the umbilicus, thirty-seven and one-half inches, umbilicus to ensiform cartilage, eight and one-half inches, umbilicus to pubes, seven and one-fourth inches Mr Edwards who performed left lumbar colotomy in this case, made an incision three inches long, parallel to the last rib, and midway between it and the crest of the ilium, the center of which was rather more than half an inch posterior to a point midway between the superior spinous processes of the ilium Bowel was stitched fast in the incision and opened at once, when a large basin of liquid feces were removed Motions continued to pass through the opening and in eight days all distension gone and sutures removed Discharged in six weeks, relieved

Transverse colotomy is very rarely performed Allingham, Bennett and Turner each reporting one operation

Case 5—B D, age 32, was admitted into St Mark's Hospital under the care of Mr H W Allingham, who diagnosed his trouble as one of dysenteric stricture of the rectum, the extent of which could not be determined Patient had the appearance of having been a very strong man He resided in one of the tropical regions, and gave a history of having had a number of attacks of dysentery which, he said, had weakened and reduced him very much in flesh No history of syphilis could be obtained Apart from the symptoms caused by the stricture he complained of pain and soreness in his bowels, and pressure over the pelvic region elicited pain and tenderness Mr Allingham began the operation of left inguinal colotomy, but in coming down on the colon found it so bound down by adhesions, near to the middle and posterior wall of the pelvis, that it was impossible to pull it up into the incision He, therefore, closed the opening and did the transverse operation, having ascertained through the first opening that the colon was fixed too far away to do a left lumbar operation In this case the final incision was made one inch below the umbilicus and a little to the left of the median line, and here the transverse colon was so matted down that it could not be brought far enough into the opening to make a good spur However, it was stitched fast into the incision, the result being a fecal fistula instead of an artificial anus In about six weeks he operated upon him again for the fistula and slight contraction of the opening Small incisions were made in the right, left and dependent sides of the orifice, the mucous membrane of the posterior part of the colon brought forward and stitched into the incision on the left side, hoping that it would unite and serve to direct the motions out through the opening This gave way, however, and the purpose of the operation was defeated

In submitting this case I am aware of the fact that it is a mooted question as to whether or not dysentery is a cause, or at least a frequent cause, of stricture of the rectum Therefore, I desire to state in this connection that Dr Woodward, U S Surgeon General during the late war, recorded no case of intestinal stricture resulting from dysenteric ulceration, and there is no specimen to be found in the Army Museum While Dr Joseph Ewart (Art on Dysentery, Quain's Dictionary of Medicine) states that "if the ulceration involves a large portion of, or the whole circumference of, the mucous membrane, the subsequent contraction may produce dangerous narrowing of the caliber of the gut or stricture of the sigmoid or rectum" Mr Cooper and Mr Edwards in their book on "Diseases of the Rectum" state that "ulceration due to dysentery is another cause of stricture of the rectum, though opinions differ as to the frequency of such complication," and that, "in fatal cases of tropical dysentery, the morbid changes are sometimes found to extend from the cecum to the anus, and to be most severe in the sigmoid flexure and rectum"

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May 9 Mr Cooper performed left inguinal colotomy May 11 The dressings were removed and the gut incised May 12 Aperient given May 13 Bowels acted through the colotomy opening May 15 All sutures removed May 17 Patient chloroformed and Mr Edwards cut away the excessive portion of the intestine, about one fourth of an inch above the incision No clamp being applied, the hemorrhage was very profuse and difficult to control Bowels acted from the upper opening June 3 Patient discharged, relieved, and well pleased with the result

I report the above, somewhat in full, because it serves to illustrate the usual course and result of the average case of inguinal colotomy

Case 2—Miss B , age about 18 years, schoolgirl June 13 Left inguinal colotomy performed by Mr Allingham for stricture and ulceration of the rectum On pulling out the sigmoid it was found to be twisted upon itself The mesentery being quite long, twenty inches of the gut were pulled through the opening and fixed outside of the belly wall In this instance, the mesenteric suture was left rather long, to serve as a kind of guide in opening the gut Usual dressing applied, bowel opened on the third day, and on the tenth, applied his clamp and completed the supplementary operation

This was a case in Mr Allingham's private practice, which he kindly invited me to see, and the huge amount of intestine removed (twenty inches) makes it one of special interest. He recommends that where patients are likely to have a long lease of life, to remove all the intestine that can be drawn through the inguinal opening, but when the patient is very much exhausted from malignant disease, and not likely to live long, to be content with pulling out sufficient bowel to make a good spur, and from observations made in the out-department at St. Mark's, I am inclined to believe that the method of Mr. Allingham is to be preferred to that of those who advise pulling out the intestine from the upper angle of the incision and passing it in again at the lower, for in those cases in which the proximal and distal end of the intestine had been pulled out, until no more could be made to protrude, no prolapse or hernia was seen, but when this precaution had not been carefully taken, hernias and prolapses were frequently observed, and they are a source of constant annoyance, trouble and discomfort to the patient. Doubtless this supplementary procedure increases to a certain extent the seriousness of the operation, but if the patient's life is to be prolonged for a number of years this possible hernia must be prevented, or his future existence will be a very unhappy one indeed. Right inguinal colotomy is performed in very much the same manner as that of the left, except that the incision is usually made a little lower down and rather nearer to Poupart's ligament.

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In submitting this case I am aware of the fact that it is a mooted question as to whether or not dysentery is a cause, or at least a frequent cause, of stricture of the rectum. Therefore, I desire to state in this connection that Dr. Woodward, U. S. Surgeon General during the late war, recorded no case of intestinal stricture resulting from dysenteric ulceration, and there is no specimen to be found in the Army Museum. While Dr. Joseph Ewart (Art. on Dysentery, Quain's Dictionary of Medicine) states that "if the ulceration involves a large portion of, or the whole circumference of, the mucous membrane, the subsequent contraction may produce dangerous narrowing of the caliber of the gut or stricture of the sigmoid or rectum." Mr. Cooper and Mr. Edwards in their book on "Diseases of the Rectum" state that "ulceration due to dysentery is another cause of stricture of the rectum, though opinions differ as to the frequency of such complication," and that, "in fatal cases of tropical dysentery, the morbid changes are sometimes found to extend from the cecum to the anus, and to be most severe in the sigmoid flexure and rectum."

Dr. Mathews, in his "Treatise on Diseases of the Rectum," says: "I have many times seen patients who gave a history of having had dysentery, and were treated for a long time for the affection, but a close scrutiny of the case revealed the fact that the so-contaminating no less than 300 men within a period of ten months, this represents merely the primary transmission of the disease, the later effects, which must have followed, on others, can hardly be imagined

The duration of the contagious period of syphilis has never been fixed with any accuracy, and varies somewhat, as is known with the character and faithfulness of the treatment, and its duration During the first year it can be most easily propagated, it is also abundantly contagious during its second year, and even up to the fifth year many cases are reported where the disease has been conveyed to others, how much later this is possible can not be determined with certainty, but instances are on record up to the seventh year or even later What a fertile source of disease, then, is a single syphilitic individual, if for even two years he is capable of infecting others whenever a proper opportunity occurs! Any one who has had much to do with venereal clinics, and has seen how utterly reckless many of the patients with syphilis are, and how little they can be made to appreciate the dangers to which they expose others, even in their every-day family and industrial life, will fully appreciate the plea for the restriction of the disease

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At a meeting of the Saratov Society of Medical Men, it was reported that the proportion of syphilitic patients (infected chiefly in a non-venereal manner) amounted to from 8 to 10 per cent of the total number of patients coming under observation, the statement was made that 'An almost universal syphilization of the Government's population is to be expected in the near future"

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Happily, owing to increased knowledge of the disease, these instances of the extensive spreading of syphilis in special localities are becoming more and more rare, but a study of the literature of the subject shows that individual instances of the transmission of syphilis by innocent means are multiplying greatly, and that there is a real danger from unrestricted syphilis Some of these peculiar dangers we will now study

Coming now to the special consideration of the third division of our subject we will consider more particularly the extra-genital transmission of syphilis

The methods by which non-venereal syphilis may be acquired are innumerable, and relate to almost every conceivable circumstance and surrounding of life As each new case, or series of cases, is reported, it becomes more and more probable that the number of instances in which syphilitic infection has thus occurred is far greater than is commonly supposed

With a poison so virulent, and capable of being transported and introduced in so many different ways, endowed with the possibility as far as is known, of being preserved for an indefinite period, the only wonder is that cases of non-venereal syphilis are not even more common than they are now known to be When the conditions for its entrance are present, namely, a solution of continuity of surface and material from a person in an active stage of syphilis, are present, it will be seen that inoculation rarely fails to take place on any and every portion of the body

Of the two methods of communicating the disease, the *immediate* and the *mediate*, the former is by far the more common, and is the mode in which most cases of venereal syphilis are acquired Mediate transmission, while much less frequent, is, in one sense, much more important, because of its insidious character, the source of infection often being unsuspected, until long after the disease has become fully developed in the victim A large number of cases of innocent syphilis occur through mediate infection, although very many are also caused by immediate transmission, as in kissing, biting, in the infection occurring between nurslings and infants, etc

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Under the first class there are a vast number of separate data, relating not only to the ordinary utensils of common life, cups, spoons, pipes, etc, but also to various articles of clothing, towels, sponges, syringes, etc, likewise to tooth brushes, pins, etc Among the industrial pursuits in which syphilis has been communicated may be mentioned, glass-blowers, assayers, weavers, musicians, conductors, housemaids, cooks, laundresses, furriers, upholsterers, druggists, artificial flower makers, clerks, cashiers and others

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Hundreds and thousands of physicians and accoucheurs and midwives have been inoculated in the honest practice of their calling, as probably all present can recall one or more instances with which they have been acquainted Vaccination has furnished large numbers of cases of innocent syphilis in times past, and among other modes of propagating the disease may be mentioned tattooing, circumcision, skin-grafting, cupping, breast drawing, wound-sucking, cleansing the eye with the tongue, as also the use of dental instruments, the Eustachian sound, minor surgical operations, etc

But all this brief and hurried mention of the modes of infection conveys but to a very slight degree any idea of the real facts in regard to this branch of our subject, as it has been developed to the writer during a study of the subject for the past ten years The amount of material collected has exceeded all expectation, many times, and together makes a mass of evidence of the dangers attending the disease which can not be gainsaid or neglected In the digests of literature which have been prepared, appear records of many thousands, or even tens of thousands of cases where the individual has contracted the disease as innocently as would be the case in regard to small pox, yellow fever, or diphtheria

From what has preceded it may be readily understood that syphilis is a disease which presents no little danger to the public health, and to that of every individual While undoubtedly an exaggerated idea of the perils connected with it might possibly be obtained there is little danger of error in this direction No amount of reasoning or argument can do away with the facts which are known with regard to the disease, and which may be proven from the very highest medical authorities

Syphilis is now one of the principal diseases which affect the human race, and is undoubtedly on the increase, owing to the utter want of sanitary control over it in the larger part of the world Unfortunately, owing to the same reason there are but few reliable data showing its relative presence in different parts of the world Something may be learned from the army reports, but in most instances this source of information is not available, inasmuch as reference is usually made only to "venereal diseases," and not syphilis specifically

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The rod, as it has been commonly supplied in this country has consisted of one-half of a glass rod of about one-fourth of an inch in diameter, or of a concave cylindrical surface, having about the same curvature, ground out from a plate of glass The concave cylinder must always be inferior to the convex, because with the former the length of the line diminishes as the cylinder is moved from the eye, occupying the full width of the rod or cylinder surface only when it is placed at the nodal point of the eye, while with the latter, the line occupies the full width of the cylinder surface when placed at its contaminating no less than 300 men within a period of ten months, this represents merely the primary transmission of the disease, the later effects, which must have followed, on others, can hardly be imagined.

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The part of a cylinder that can be used for the purpose of the test is, however, always considerably less than one-half of the complete rod Take the case of a plano-cylinder with the flat surface placed towards the source of light, and the convex surface towards the eye, assuming the rays to be parallel and to fall perpendicularly on the plane surface, the refraction is all at one surface

The deviation produced in a ray increases as the position of the ray is removed from the center according to the law of the sines The sine of the angle of refraction being equal to the sine of the angle of incidence multiplied by the index of refraction of the glass This increase of deviation continues until a point is reached, where the sine of the angle of refraction becomes the sine of 90 degrees That is, until the light passing out of the surface becomes tangent to it, beyond which no light can emerge If the index of refraction be that commonly possessed by optical glasses, a little over 1 53 the angle of the incidence that gives emergent rays tangent to the surface, is about 40°, 50′ Therefore 81°, 40′ is the largest segment of a cylinder that can be of any possible use for this purpose In order, however, to reduce the thickness of the glass I have chosen to use only 60 degrees of the circumference of the rod

If the cylinder be placed so that its principal focus lies at the nodal point of the eye, the whole angle subtended by it will be occupied by the streak of light that we desire to obtain If it be removed farther from the eye, the streak will still occupy the whole width of the glass, but this will subtend a smaller angle On the other hand, if it is brought closer to the nodal point than its focal distance the angle subtended will remain about the same, or diminish slightly on account of aberration, the line no longer occupying the full width of the cylinder It follows, therefore, that the most favorable position for the cylinder is that at which its focus will fall on the nodal point of the eye

As commonly employed in the cylinder test, the rod is placed about fifteen or twenty mm or a little more from the nodal point Hence the cylinder that can be used to best advantage is one that has that focal distance I have, therefore, chosen the segment of a rod or cylinder of 10 mm radius, employing a portion of it, 10 mm long by 10 mm wide Such a cylinder gives a line of light double the length obtained where the ordinary quarter inch rod is placed in the same position

The weakening of the cylinder used makes it applicable for the test to be presently referred to, at the distance of ordinary near work

The other portion of the instrument that I to day present, is the Rotary Variable Prism Suppose we have a prism placed in a certain position, which we will call the primary position, and then rotate its base in the plane bisecting its refracting angle In the primary position, the full effect of the prism is produced in a certain direction, as this is departed from its action is in some other direction, but we may regard it as replaced by two components, one exerted in the primary direction, the other perpendicular to it The relation of these components to each other, and to the original power of the prism is the relation of the cosine and sine of an angle to each other and to radius That is, the component in the direction of the primary position diminishes as the cosine of the angle of departure from that position The component perpendicular to the primary position increases as the sine of the angle of departure from that position This is illustrated in the accompanying Fig 1

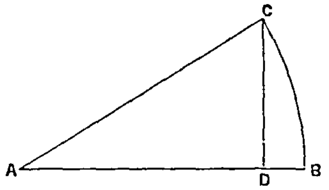


Fig 1

Thus we have two variable components, one in the direction of the primary position, the other perpendicular to it, either of which can be used for the purpose of the variable prism So far as I know, the variable perpendicular to the primary position and increasing as the sine of the angle through which the prism is rotated, is the one that has always been employed

It is liable to these objections that, starting from zero its increase is at first most rapid, gradually becoming slower and slower, until at the perpendicular it ceases This necessarily arises from its relation to the sine of the angle Its disadvantages have doubtless occurred to every one who has used the rotary prism Where the greatest delicacy and exactness is desired, delicacy and exactness are most difficult to obtain with the strong prismatic effects when more rapid change would be convenient, the increase is slowest On the other hand, the diminution of the cosine of an angle and the corresponding diminution of prismatic effect in the direction of the primary position is slow at first and then increases in rapidity, reaching its maximum when the angle reaches 90 degrees On this account the component diminishing with the cosine is decidedly superior to the one that has heretofore been employed Its application will be referred to presently

Whichever component is used it becomes necessary to get rid of the other unless the other can, from the nature of the case, be disregarded The ordinary method of eliminating the undesired component is by using two prisms and causing them to revolve in opposite directions, so that the undesired component of one prism shall just neutralize that of the other, and the net result be the sum of the components of both prisms in the desired direction

In combining the variable prism with the cylinder test it is, however, quite unnecessary to resort to any means of getting rid of the undesired component This will always be perpendicular to the axis of the rod or cylinder and in the direction of the length of the line, so that a slight shifting in this direction merely brings a slightly different part of the line opposite the light image of the other eye The combination, therefore, of two rotary prisms with the cylinder test is unnecessarily complex The single rotary prism perfectly answers the purpose

If it is desired to use the positive component (the increase of prismatic effect perpendicular to the primary position and proportioned to the sine of the angle of rotation) the primary position must be with the base parallel to the axis of the cylinder, so that all its effect is produced in the direction of the line of light perpendicular to that axis Then as rotation is made either way, there is developed an increasing prismatic effect in the direction of the axis of the cylinder and perpendicular to the line of light, which prismatic effect carries the line of light to the light image, as seen by the other eye This effect, as has been pointed out, of course increases most rapidly at first and more slowly later

If, however, it is desired to use the other component the prism must be placed with its base perpendicular to the axis of the cylinder, so that it will exert its effect in the direction of that axis It must be borne in mind that the variable must start at zero To utilize the diminishing component, therefore, the prism in its primary position must be neutralized by a fixed prism Then as the rotary prism is turned, the variable prismatic effect diminishes leaving unneutralized the effect of the fixed prism The more the rotary prism is turned from its primary position, the more the effect of the fixed prism is felt This effect increases as the cosine of the angle diminishes

In using the combination of rotary prism with the Maddox rod, the fixed prism may be ground on the rod as is done in the instrument presented Then, when the rotary prism is in its primary position, the prismatic action of the rod is just neutralized, as the rotary prism is revolved, the prismatic action of the rod comes more and more into play until at 90 degrees the rotary prism exerts no influence in the direction of the axis of the rod, and the full prismatic effect of the rod is attained

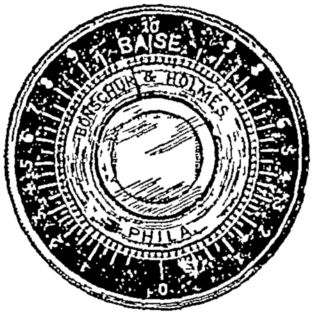
Revolving the rotary prism still farther, the cosine of the angle of rotation begins to increase, but in the opposite direction, so that the effect produced by the rotary prism is now added to the prismatic effect of the rod, until finally at 180 degrees the prismatic effect produced in the direction of the axis of the rod is equal to the sum of that of both rod and prism

For this purpose, I have chosen a rotary prism of five centrads, with an equal effect of the rod It will be noticed that, leaving zero, the index has to sweep through a space of over 18 degrees before the first quarter centrad of prismatic effect is produced, and almost 37 degrees before one centrad is reached Continuing, the change becomes more rapid until we reach five centrads, the full effect of the rod, at 90 degrees Passing on, the change again becomes slower until the maximum of ten centrads is reached at 180 degrees Precisely the same effect is produced and in the same direction, whichever way the prism is rotated from the primary position With such an instrument, the lowest degree of heterophoria can be measured with most minute accuracy Of the scientific advantage of this there can be no question, and my experience indicates it is of practical value

On the other hand, the employment of the simple rod or cylinder and the placing of the rotary prism perpendicular to it, allows one to produce a prismatic effect either way in the direction of the axis so that when this is placed horizontally, either exophoria or esophoria can be measured without altering the position of the instrument or, in the same way, right or left hyperphoria when the axis is vertical

I have had this combination of cylinder test and variable prism mounted, so that it could be used in the ordinary trial frame or in a handle held before the eye With the cylinder test it is unnecessary to have any leveling instrument, since the images are not displaced, but their fusion opposed by their dissimilarity

Before leaving this subject it may be worth while to note that to use the variable component proportioned to the cosine for the ordinary rotary prism, such as Risley's, it is only necessary to place the primary position of the rotary prisms where they will act together instead of neutralizing each other, and then to neutralize them both in this position by introducing a third prism of double strength, thus instead of using two rotary prisms of fifteen centrads each, to use two rotary prisms of seven and one half centrads and neutralize them by one fifteen centrad prism It seems to me that this modification of the rotary prism will make it a much more satisfactory instrument, especially for the lower degrees of deviation



With the forms of rod test heretofore employed, the great strength of the cylinder made it impossible to use any test object except a point of light and, therefore, practically precluded the use of a rod test for ascertaining the balance of the ocular muscles at the near working distance The weaker cylinder that I have adopted allows the recognition of a dim, but very characteristic streak when a black dot upon white paper is looked at, at the ordinary working distance, so that the instrument is as applicable for testing the balance of the ocular muscles at the near point as at a distance It furnishes a ready practicable means of measuring heterophoria at the reading distance, or for testing the balance of the ocular muscles in different portions of the field of vision, something of which I have often felt an urgent need

One may properly hesitate about asking the attention of the profession to a new device, but the present instrument seems to justify itself because it does the work more exactly, because it has wider range of application, and because it is at the same time more simple and less expensive than its predecessors

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SELECTIONS

Report of the Surgeon General of the Army —We give below a synopsis of the Report of the Surgeon General of the Army for the fiscal year ending June 30 1893 The report begins with a statement of the disbursements from the appropriations made by Congress for the support of the Medical Department of the Army It then discusses at length the various points which are here briefly outlined

Army Medical Museum —The total number of specimens received during the fiscal year was 1,038, total number of specimens in the Museum June 30, 1893, 32,265 The Museum is represented at the World's Columbian Exposition at Chicago by a display of specimens including models of hospitals, of a railway train for transportation of wounded, and of hospital steamers, also a series of pathological specimens illustrating tuberculosis and tumors, a series of ninety sections of human embryos, a series of 346 photo micrographs and a series of microscopes illustrating the history of the instrument, with other apparatus

Library —There were presented to the Library during the year, 633 books and 7,981 pamphlets and journals Total number of books now in Library, 110,653, of pamphlets, 173,100

Volume XIV of the Index Catalogue, including from "Sutures" to "Universally," forming a volume of 1,016 pages, has been completed and is now in the printer's hands

Providence Hospital —933 patients were admitted for treatment during the year, the average number treated per day having been 104

Army and Navy General Hospital, Hot Springs, Arkansas —Thirty officers and seventy-five men were admitted during the year Sixty per cent of these affected with rheumatism were returned to duty Three times as many men could be treated in the course of the year as are received

The commanding officer recommends that electric light be introduced in place of gas, and that increased accommodations be provided for officers, in both of which recommendations I fully concur

Medical Officers —The following changes occurred during the year

Deaths One deputy surgeon general with the rank of lieutenant colonel one surgeon with the rank of major

Retirements One surgeon general, with the rank of brigadier general, one assistant surgeon general with the rank of colonel, one assistant surgeon with the rank of captain (Capt James A Finley Act of Feb 8, 1893)

Promotions One deputy surgeon general with the rank of lieutenant colonel, to be assistant surgeon general with the rank of colonel, three surgeons with the rank of major, to be deputy surgeons general with the rank of lieutenant colonel, two assistant surgeons, with the rank of captain, to be surgeons with the rank of major, four assistant surgeons, with the rank of first lieutenant, to be assistant surgeons with the rank of captain

Appointments One deputy surgeon general with the rank of lieutenant colonel, to be surgeon general with the rank of brigadier general, James A Finley, late captain and assistant surgeon to be assistant surgeon with the rank of captain, Feb 13, 1893, with rank from Nov 10, 1879 (Act of Feb 9, 1893), twelve assistant surgeons with the rank of first lieutenant

Resigned One assistant surgeon with the rank of captain, one assistant surgeon with the rank of first lieutenant

Commission Vacated by New Appointments One deputy surgeon general, with the rank of lieutenant colonel

Vacancies There are now five vacancies in the Medical Department

The establishment of an Army Medical School in the city of Washington, D C, was authorized by General Orders No 51, A G O, June 24, 1893, for the purpose of instructing approved candidates for admission to the Medical Corps of the Army in their duties as medical officers The course of instruction at this school will extend over four months and will be given annually, beginning on the first day of November It is believed that great benefit will be derived by supplementing in this way the college courses of the young men accepted for appointment

Hospital Corps —The authority of the Secretary of War, given in General Orders No 25, 1892, to enlist from civil life into the Hospital Corps, and the Act, approved July 13, 1892, raising the pay of Hospital Corps privates from thirteen to eighteen dollars per month, have greatly benefited the Corps by enlarging the sphere of selection and offering better inducements to good men to enter its ranks

There were in service June 30, 1893, 122 hospital stewards, 79 acting hospital stewards and 585 privates, 58 of the last serving with the companies of instruction, and 527 on duty with troops and at military stations

A comparison of the men trained in the companies of instruction, with the members of a detachment locally selected and instructed is generally to the advantage of the former As to promotion by competitive examination, there is no doubt that this system has had a marked effect in elevating the standard of proficiency bringing the intelligent, able and ambitious men to the front and giving to the Corps as its non-commissioned officers its most efficient and capable members It is considered that in the education of the Corps greater benefit has been derived from drills, which are practical object lessons, than from lectures Only the men ambitious of promotion have benefited from lectures Company bearers have shown but little interest in their special work A satisfactory equipment for the Corps is a matter of some difficulty, as its members may be sent on field service at one time with an infantry and at another with a cavalry command This, however, will be settled satisfactorily in progress of time

White linen or cotton duck is recommended as the most suitable wear for men occupied in ward or dispensary duties

HEALTH OF THE ARMY

During the past year the health of the Army has been excellent Perhaps at no time heretofore has the Surgeon General been able to invite attention to a better record of health and consequent efficiency, and this although the rates have been materially increased by an undue proportion of sickness among the Indian companies

The admission rate per thousand of strength was 1,270 42 as compared with 1,364 78 during the previous year and 1,459 65 during the preceding decade The lowest recorded admission rate, 1,247 in 1887, is practically the same as that now reported The number and duration of the cases were equivalent to a non-effective rate of 39 60 as compared with 42 01 during the previous year and 43 41 during the preceding decade The non efficiency may be expressed also by the statement that each officer and man of the Army was on an average sick for 14 5 days during the year, as compared with 15 3 and 15 9 days respectively during the previous year and each of the years of the previous decade The number of men discharged for disability was 18 35 per thousand of strength as against 17 23 (the lowest annual rate to which these discharges have been brought) in the previous year and 30 70, the average of the ten years preceding The death rate from all causes was 6 44, comparing favorably with 8 05 and 8 75 respectively for the previous periods already mentioned, as well as with 6 33 for the year 1889, the lowest annual death rate hitherto reported Excluding deaths from injury the deaths from disease were equivalent to a rate of 4 36 per thousand of strength, as against 5 03 and 5 81 respectively for the previous year and decade, and against 3 95 for the year 1889

As causative of non-efficiency, injuries take first place in the records of the past year, having occasioned 8 12 of the total of 39 60 constantly on sick report per thousand of strength Venereal diseases take second rank as a disabling cause, 5 33 men per thousand of strength having been constantly under treatment on their account Specific febrile diseases respiratory and digestive diseases and rheumatism (including muscular) had each a non-effective rate of 3 3

The absolute number of discharges for disability, which gave the rate of 18 35 per thousand of strength, was 493, of which 67 were for rheumatism and diseases of the bones and joints, 58 for injuries 53 for consumption, 53 for venereal diseases, 44 for epilepsy and insanity, 44 for diseases of the heart and circulation, 27 for diseases of the eye, 14 of the ear and 21 for hernia

The absolute number of deaths was 173, of which 56 were caused by violence, 20 by consumption, 17 by pneumonia, 15 by diseases of the nervous system 13 by typhoid fever, 13 by diseases of the heart, 8 by diseases of the kidney, 6 by influenza, and 3 by alcoholic poisoning

Health of the Military Departments —The admission rate was highest, 1,515 50, in the Department of the East, but all the other rates found their maximum in the Department of Texas, death rate from disease 7 43, from all causes 11 48, discharge rate for disability 27 66, rate of non efficiency 54 25 The latter department must therefore be credited with the least satisfactory record The Department of the Columbia had the lowest admission rate, 772 73, non effective rate 27 88 and death rate from all causes 3 67, but the Department of California had only 1 54 deaths from disease and the Department of the Platte 12 32 discharges for disability per thousand of strength present during the year

Of the posts having bad records during the year, three had the admission rate over 2,000 per thousand of strength, Fort Hamilton, David's Island and Columbus Barracks, four ranged from 2,000 to 1,900, Fort Barrancas, Washington Barracks St Francis Barracks and Fort Reno, three from 1,900 to 1,800 Fort Marcy, Mount Vernon Barracks and Fort Supply, and two from 1 800 to 1,700, Forts Monroe and Ringgold Of the posts having the highest non efficient rates three reported 70 and over per thousand of strength, Columbus Barracks, and Forts Barrancas and Ringgold, four ranged from 70 to 60, Forts McIntosh, Reno, Yates and Clark, and nine from 60 to 50, Forts Bayard, Sam Houston, McPherson, Jackson Barracks and Forts Marcy, Canby, Custer, Wayne and McHenry The causes of the high rates at most of these posts have already been indicated briefly Excluding the recruiting depots, arsenals and smaller posts, Fort Barrancas may be regarded as presenting the worst record In 1889 and prior years this,post had rates rather lower than the average Since that year they have been unusually high, mainly caused by diarrhea, alcoholism and diseases of the integuments

Exclusive of the smaller posts and arsenals those posts having the best admission rates were Fort Spokane with 518 52, and Forts Washakie, Missoula, Niagara and Sherman, with rates ranging from 600 to 700 The best non efficient rate, 15 48, was reported from Fort Mackinac The rates ranged from 20 to 25 at Forts Washakie, Wadsworth and Missoula, Benecia Barracks and Forts Warren and Huachuca

Cholera —In anticipation of an invasion by this disease, on account of its prevalence at some of the European ports largely concerned in the shipment of immigrants to this country, medical directors and post surgeons were duly reminded, by means of a circular on preventive measures, of the precautions requisite for the protection of our military stations Fortunately, however, the imminence of the danger subsided by the gradual extinction of the disease at the quarantine of the port of New York, and it became evident that several months would probably elapse before similar threatening conditions would recur Influenced by the circular from this office, medical directors on the return of warm weather again notified their subordinates of the importance of giving special, attention to local sanitary conditions

Typhoid Fever —One hundred and fifty one cases, of which fourteen were fatal, were reported Isolation, disinfection and a careful supervision of the water supply checked the progress of the disease, so that only at a few posts were there more than one or two cases Fort Reno had twenty-three, Madison Barracks, nineteen

Influenza —Of this disease 1,793 cases were reported, the largest number at any one post having been 141, one fatal, at Fort Custer, Mont Many posts reported no such cases, but these had usually an increased rate for catarrh and bronchitis A total of six deaths was ascribed to this disease

Malarial Diseases—were not unusually prevalent Washington Barracks and Forts Sill, Myer and Clark had high rates The water supply at the two last named posts is believed to be concerned in the prevalence of autumnal fevers, efforts are being made to improve these supplies Fort Brown, Texas, continued free from malarial fevers during the year

Venereal Diseases —Columbus Barracks had the highest rates, admission 292 72 and non-efficiency 18 54 per thousand of strength The improvement noted in last annual report has not been kept up at this recruiting depot A fall in the rate to 266 20 in 1891 from 380 46 in 1890, and 462 44 in 1889, suggested hope for the future which is not sustained by the rates now recorded Fort Ringgold, Jackson Barracks and Fort McPherson follow Columbus Barracks in the relative frequency of their cases, 208 97, 198 11 and 195 48 respectively, but Fort McIntosh takes second place in order of non-efficiency with a rate of 15 47, while Fort McPherson and Jackson Barracks follow with 13 67 and 12 16

Alcoholism —The rates compare favorably with those of the previous year

Suicide —Twenty-two cases are reported

Influence of Age, Arm of Service, Nativity and Length of Service on Liability to Disease —During the year some interesting observations were made on the influence of age, arm of service, nativity and length of service on the susceptibility to disease Men from 30 to 50 years of age are less liable to become sick than younger or older men The economy of enlisting young men and of limiting the period of service to ten years is by no means sustained by these observations

The Indian prisoners are well cared for at Mount Vernon Barracks, Ala Improved sanitary conditions are manifesting their influence in lessening the prevalence of diarrhea among the children and consumption among the adults

THE SANITARY CONDITION OF THE ARMY

Quarters —Great improvements have been made during the past few years in the character of the quarters provided for the Army, and the officers of the Quartermaster's Department are entitled to great credit for their earnestness and intelligent efforts to have all work of this nature carried out in accordance with advanced sanitary views Nevertheless, it appears to me that when any important work of construction, alteration or repair is under consideration it would be well to have on record the views of an officer of the Medical Department on any sanitary questions involved In many instances the medical officer has a special knowledge of the locality in its sanitary bearings that is too valuable to be overlooked I desire, therefore to urge the recommendation, made on several previous occasions by my predecessors in office, that the plans of all buildings hereafter to be constructed, of alterations to be made, or of sanitary improvements to be instituted at our military posts be submitted to a board of officers, one member of which shall be a medical officer The construction and improvement of our military posts are matters of so much importance as to merit their consideration by boards of officers before commencing work on plans drawn up by an individual Moreover, on account of sanitary considerations connected with the selection of site, construction of barracks and other post buildings, with their heating, lighting and ventilation, drainage, sewerage and water supply, the Medical Department should be represented on such boards It is better to build well from the first than to have to make alterations in a completed structure, for these are always expensive and seldom satisfactory The approval of a board before final action is taken would tend to eliminate mistakes and lessen the need for future changes

The buildings at a few of the posts are old, dilapidated and leaky The makeshift sanitary arrangements at Fort Keogh should not be permitted to continue unless the post is likely to be abandoned in the early future Among its many needs are roomy and well ventilated quarters for the troops The best of the officers' quarters at Eagle Pass, that occupied by the commanding officer, is not so good as the quarters ordinarily provided for a non commissioned officer at any other post The quarters of the men have ample space and good ventilation, but the roofs leak and the walls have to be propped to prevent them from falling outwards All the occupied buildings at Fort Custer are old, with the exception of one set of quarters and the guardhouse The barracks, particularly, are much dilapidated, they can not be kept comfortable in winter As the abandonment of Fort Whipple has been in contemplation for some time few repairs have been made to the buildings and the post presents a worn and dilapidated appearance The buildings are wooden, decidedly overcrowded, and ventilated only by the doors and windows With few exceptions all the buildings at Fort Yates are old and poorly adapted for the purposes for which they are used, but they are in as good sanitary condition as it is possible to have them in view of the uncertainty as to the continuance of the post The barracks are loose-jointed and cold in winter, permitting the entrance of cold winds and snow Storm doors and double window sashes were provided on the recommendation of the post medical officer Damp, cold and unventilated casemates continue to be occupied as quarters at Forts Warren, Wadsworth and Adams These are not only undesirable but unhealthy The quarters occupied by married enlisted men at some of our posts are wholly unfit for occupancy Those at Fort Yates are described as wretched Casemates are occupied at Fort Warren where, from the chill dampness and bad air the children are anemic and shows signs of rachitis At Fort Grant these quarters are in bad repair and crowded to the point of indecency At Fort Vancouver they are reported as scarcely habitable, built on ground honeycombed with disused privy pits and cesspools At Fort Missoula the old log huts thus occupied should be destroyed, as also some shanties owned by a civilian and rented to married soldiers The best of these, constructed by the soldiers for themselves and families, at Fort Du Chesne, are of logs, but most of them are of scrap lumber eked out with condemned canvas and old coal oil cans, the rooms without flooring, small, damp and dark Sanitary improvements can not be instituted at the expense of the occupants, and at present there are no means of effecting them in any other way Quarters like those at the posts mentioned are breeding places for disease, and as garrisons become larger the problem of quarters for the married soldiers is likely to become more complex I recommend a return so far to former methods as to provide public quarters for a limited number of married men in each organization, all others being strictly prohibited from having their families at the post A provision of this kind would be regarded as a privilege awarded to deserving soldiers, and would permit the whole of these huts and shanties to be destroyed

In reporting on the severity of the winter season at some of our northern posts, medical officers have criticised the allowance of fuel Captain Clendenin, at Fort Brady, has represented that an officer exposed to all the rigors of a severe winter has to expend from twelve to eighteen dollars per month for fuel to keep his quarters comfortably warm, while his more fortunate comrade stationed in milder climate, is exposed to neither the inclemency of the season nor to the expense of protecting himself and his family against it I commend this subject to the consideration of higher authority

Some medical officers have called attention to the practice of flushing the floors of quarters, dormitories, dining halls and other occupied rooms for the purpose of cleaning them This is an unsanitary practice which should be prohibited by commanding officers Floors when lightly stained and waxed can easily be kept clean, dry and wholesome

Disposal of Garbage, etc —The usual method is to collect in closed barrels or galvanized iron pails and transport to a dumping ground in the vicinity of the post For convenience, ground near the inhabited area is selected, and the accumulations of years become so extensive as to be a nuisance and a reproach Ashes and cinders may be utilized on roads or in filling, and if not required for such purposes their deposit is not injurious Stable manure also can generally be used upon gardens, but there is at every post much unavoidable solid waste that should be destroyed and a crematory of moderate size should be built at all the modern and permanent posts Where the reservation is small and surrounded by civil communities it is imperative to dispose of the wastes in this way There need be no uncertainty as to the efficiency of garbage crematories, they have proved successful in many instances

Water Supplies —The subject of water supply has been agitated earnestly during the past year at many of the posts, with the result in most instances of carrying out or instituting improvements The water wagon is now practically a thing of the past It exists only at Fort Du Chesne and Eagle Pass At the former it brings water from the Uintah River, at the latter from the hydrants of the neighboring town

Food —The food supply has been reported ample in quantity and of excellent quality The few exceptional cases in which some article of the supply is made the subject of unfavorable criticism serve merely to emphasize the excellence of this provision for the well-being of the soldier Moreover, most of the references to inferior quality have their origin in the naturally poor condition of Western beef cattle at certain seasons

Clothing —Medical officers generally appear to be satisfied with the clothing of the men, as unfavorable criticism has been exceedingly rare Those stationed at Camp Eagle Pass and Key West Barracks desire a lighter quality of woolen underwear for the men J Y Porter, M D, attending physician at the latter station, holds that his long professional experience in that climate has demonstrated the necessity for wool as a texture for underwear, but the articles should be of light weight, otherwise they will be uncomfortable and irritating He considers that 'feather weight" all wool undershirts and drawers would not be any more expensive of purchase than those now furnished, and would more decidedly conduce to the health and comfort of the men He thinks it likely that if light woolen articles are not provided the men will purchase for themselves the cheap gauze stuff, which does not possess the property of preventing rapid evaporation from the body when bathed with perspiration, and which consequently tends to the production of those diseases that arise from chilling of the surface

On the other hand, the post surgeons at Forts McPherson and Brady take exception to the drawers issued, as lacking in the necessary warmth for winter wear Colonel B J D Irwin, Assistant Surgeon General, characterizes the issue at Fort Brady as unsuitable, inasmuch as it is too light for winter and too rough for summer wear, the drawers and undershirts especially so, and Captain P Clendenin protests against the use of cotton drawers at this post "The underclothing should be of wool and of good quality to protect a man on guard duty when the temperature falls at night to 30 degrees F" It is understood that thick woolen drawers are now supplied to the troops in Northern Dakota

Habits, Cleanliness, Athletic Exercises etc —The habits of the men are generally reported good At some posts, as Fort Grant reference is made to the evil influence of low resorts bordering on the reservation, where drunkenness and prostitution impair the morale of the men Similar resorts in cities near military stations do equal harm to the troops The remarks submitted in presenting the data relating to the prevalence of venereal diseases and alcoholism, give a statistical expression to the habits of the men in this view of the question The habits of men of the Indian companies are reported as bad, by all the medical officers that have been connected with them They are represented as dissipated, quarrelsome and dirty

Bathing Facilities —At a few posts the facilities for bathing continue to be somewhat defective, but much has been effected of late in bettering them The poorest arrangements are probably to be found at Camp Eagle Pass, where the bath-house, a hospital tent pitched in an arroya, is furnished with only one tub Some barrels are arranged to give a shower and this is preferred by the men to the tub In summer, scarcity of water, and in winter the coldness of the weather, prevent regular bathing at this post Some of the men are therefore wanting in respect to cleanliness of person, and skin diseases are said to have resulted

Laundry Work —The laundry work of the men is usually carried on by the wives of married soldiers living in or near the garrison, or by laundrymen in the neighboring civil communities A laundry for the depot of Jefferson Barracks is managed by the Depot Quartermaster, and its charges fixed by the Council of Administration This method of doing the laundry work is to be recommended, particularly in view of danger from cholera or specific febrile diseases

Post Exchange —Medical opinion, at first generally in favor of the institution as tending to lessen the frequency of intoxication, appears of late to doubt the soundness of its earlier conclusions Many medical officers now consider that the comparative infrequency of absolute intoxication is offset by the facilities afforded to young men to indulge in beer drinking They are of opinion that old men habituated to the use of distilled liquors will not be satisfied with beer, but will get whisky at other places than the Post Exchange, while young men who would not leave their barracks for intoxicants of any kind are led into bad habits by the ease with which beer may be obtained and the official sanction given to its use

Recruiting —Number of applicants accepted, 9,585, or 38 3 per cent of the 25,012, the total number, rejected on primary examination 58 3, and declined 3 4 per cent Diseases of the eye were the most prolific causes of rejection, having been found to a disabling extent in 8 5 per cent of the applicants The average age of the men accepted for service was 25 39 years, height 67 48 inches, weight 145 35 pounds, measurement of chest at expiration 34 16, at inspiration 37 02, expansibility of chest 2 86 inches

Of every hundred of these recruits 68 3 were native Americans, white 57 6, colored 8 6, Indian 2 1 Of the foreign born men 9 4 came from Ireland, 9 2 from Germany, 3 1 from England, 2 2 from Canada, 1 6 from Sweden, and lesser percentages from other countries About two hundred and fifty different callings or occupations were recorded on the enlistment papers by the recruits accepted during the year

Recommendations —The introduction of electric light into the Army and Navy General Hospital, Hot Springs, Ark, and an increase of the accommodations for officers at that hospital

White linen or cotton duck as the most suitable wear for men occupied in ward or dispensary duties

The reference of all plans for the construction or alteration of buildings or of other sanitary improvements at military posts to a board of officers in which the Medical Department shall be represented

The disuse of casemates as living and sleeping rooms

The providing of suitable quarters for married enlisted men of the Army

A consideration of the want of equity in the present method of heating the quarters of officers

A prohibition of the practice of flushing barrack floors with water for the purpose of cleaning them

The construction of crematories for garbage at all permanent posts, particularly when the reservation is small and surrounded by civil communities

The establishment of post laundries at large posts to obviate the necessity of sending clothes to various localities in neighboring cities or other civil settlements

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SUBSCRIPTION PRICE INCLUDING POSTAGE
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SATURDAY, NOVEMBER 11, 1893

REPORT OF THE SURGEON GENERAL OF THE ARMY

SURGEON GENERAL STERNBERG's Report for the year ending June 30, 1893, has just been made public, but there will be some delay in its issue on account of the preparation of engravings to accompany CAPTAIN LA GARDE's paper on the "Effects of Gunshot Injury with Small Caliber Projectiles" The report is a valuable one, not only as a record of the statistics of sickness and death, for the year, in the Army, but as representing the various conditions at military posts which tended to increase or limit the spread of disease among the garrisons Under the heading of "Sanitary Condition of the Army," the condition of barrack buildings as to air space, ventilation, heating and lighting, the subsoil drainage and the disposal of garbage, waste water and excreta are considered, particularly of such posts as have been the subject of criticism on any of these points Water supplies, also, are fully discussed and the connection between this important sanitary provision and the health of the garrison is shown in several instances that are full of interest for the health officer and practical sanitarian We refer to another page of this issue of the JOURNAL for a synopsis of the SURGEON GENERAL's Report

MEDICAL COLLEGES AND STUDENTS

All the medical colleges in the United States are now in operation, with the exception of eight The number of students in this city is about the same as last year while there is a slight decrease elsewhere, the result, no doubt of the financial panic of the last six months In looking over the Announcements for the sessions of 1893–94, it is gratifying to observe, not alone the improvement in their general appearance, but the more dignified and professional tone that pervades them There is less advertising of the superior attainments and qualifications of members of faculties, of unrivaled equipment and facilities for instruction, of the unparalleled growth and success of institutions, etc It is also notable that the requirements are yearly becoming more stringent, and more in accord with the growing intelligence of the age The number of schools requiring four annual courses of lectures is increasing, the same is also true with those requiring three courses, so that the two course schools are beginning to be the exception It is also noticed that the equipment of many of the schools has been improved during the past year, and the facilities for clinical instruction much increased The outlook in this country is hopeful, and the stigma that has hitherto rested upon American medical education promises to be soon removed

KEELEYISM DISSOLVING

The *London Lancet* and the *Medical Press* denounced Keeleyism and the gold cure over a year ago as quackery of the worst stamp, and followed it up in several issues with very strong condemnations of this scheme As a result a suit for libel was begun, KEELEY giving bonds for the costs These actions for libel were telegraphed all over the country as news, and the inference made clear that this so-called great discoverer of bichlorid was going to defend his reputation, and work for humanity, and legally show his claims as one of the few immortals Timid editors who had ventured a doubt as to his claims and methods, hesitated and became silent A few medical editors grew more defiant and kept up a steady fire, but some of the wiser ones withdrew all notice, finding opposition as good an advertisement as praise

The lawyers for KEELEY very adroitly tried some new plans, one of which was to have the testimony of the discoverer of bichlorid taken by a commission, and thus avoid a troublesome cross-examination This was refused and they carried the case to a higher court, where it was decided that the plaintiff in these actions must appear in person

Such examination should be in open court, and would necessarily cover a large field of science, morals and ethics, and sundry other allied topics After a prolonged consideration it was ascertained that the great discoverer of bichlorid was so overwhelmed with medical and business interests, that he could not appear in this little matter, so the suit has been abandoned and the costs are extracted from the bond, (the law so wisely provided for) We extend congratulations to our esteemed brother editors of the *Lancet* and *Medical Press*, for this event For no one could predict the result had the plaintiff been able to come over and appear in this suit In this connection our friends will be interested to hear that this somewhat startling scheme of curing inebriety in three weeks, by a secret specific, has reached such proportions as to actually explode, or, more accurately, to lose coherence and break up into a multitude of similar schemes, each one claiming to have discovered the real cure and true method, and denouncing the others as impostors.

In this little city of Chicago, there are six distinct "gold cures," and probably more, all differing, and all claiming cures numbering into the thousands. Our English brethren will see at once that the business of curing inebriety in this country is far more important than punishing editors for skepticism and doubt.

By and-by, when these modern benefactors, with their patent stamping out and curing processes, have used up all the material in this country, they may go over to London, and our friends may have another chance to express themselves. In the meantime, the dissolving process of rank charlatanism will go on, dying from the ignorance on which it is founded. No truth in science is ever sustained by secrecy, or suits for libel, or built up by the assertions of irresponsible persons.

The medical press had made elaborate preparations to defend their suit, and had gathered a collection of facts relating to Keeleyism and its founder, which they promise to publish in the future. This material will probably find its home in the British Medical Library, and in the next century furnish data for a history of the quackery of this age, the same as data of "Berkinism" a century ago is read with such curious interest now. A fact rather startling in this abandoned suit, is that much of the expense of gathering facts against the plaintiff are considered costs of the suit and must be paid out of the bond which he gave. This is unfortunate to men of uncertain reputation, who appeal to the law for help and defense. The presence of the gold cure quackery and the consumptive cures, now so widely advertised, is additional proof of the need of a public analyst who shall examine and control the proprietary medicines offered for sale. In Germany and France all medicines of this character are examined and registered before they can be sold. This will be done in this country at an early day, from necessity and as a sanitary measure.

HEALTH OF THE MILITARY DEPARTMENT OF THE MISSOURI.

The annual report of Colonel B. J. D. Irwin, Medical Director, Headquarters Department of the Missouri, Chicago, Illinois, for the fiscal year ending June 30, 1893, has just been published. The posts in the department are Forts Brady, Mackinac and Wayne, Michigan, Fort Sheridan, Illinois, Forts Leavenworth and Riley, Kansas, Forts Reno and Sill, Oklahoma Territory, and Fort Supply, Indian Territory. Camp Oklahoma, Oklahoma Territory, was abandoned during the early part of the year. The mean strength of the Department was 3,344 men, admission rate 13.03 per thousand of strength, non-effective rate 37.4 per thousand, death rate 3.59 and rate of discharge for disability 19.14, average number of days' sickness for each man of the mean strength, 13.7. These rates are all somewhat lower than the corresponding rates of the army as a whole, and considerably lower than the rates of the Department for the previous year. Fort Sill, as in former years, leads in the number of cases of malarial fevers, 145, Fort Riley following with 94 cases, while Fort Reno reports 34 cases of typhoid fever, as against only 5 cases last year. Fort Sheridan reports the largest number of cases of diarrhea, 118, as well as of diseases of the respiratory system, 97. Four cases of cholera morbus are reported from Fort Reno, two from Fort Sheridan and one from Fort Wayne. Fort Brady shows the largest percentage of cases of alcoholism with Forts Mackinac and Wayne next in order. Forts Mackinac, Brady and Leavenworth appear as the healthiest posts in the Department, Forts Reno, Sill and Supply as the most insalubrious.

There are now in the Department, twenty-three medical officers: one Colonel, Irwin, five Majors, Tilton, Brooke, Girard, Brown and Turrill, nine Captains, Gardner, Corbusier, Appel, Banister, Carter, Gorgas, Wyeth, Ives and Clendenin, and eight Lieutenants, Glennan, Snyder, Brooke, Ware, Brewer, Newgarden, Straub and Kennedy. Two new hospitals were completed during the year. One to accommodate from forty to sixty patients at Fort Sheridan, Illinois, the other to accommodate from twelve to sixteen patients at Fort Brady, Michigan. They were constructed by the Quartermaster's Department of the Army, and have recently been occupied by the invalids of the garrisons of those stations. Concerning the hospitals, Colonel Irwin observes that as he has not had opportunity to examine them since their transfer to the Medical Department, he is unable to pronounce upon their condition or fitness for the purpose for which they were designed, but he has reason to believe that they will prove most desirable and valuable for the sick. The manufacture of ice has been carried on during the whole year at Forts Sill and Reno, Oklahoma Territory, and at Fort Supply, Indian Territory, during the greater part of the year. The scarcity of water at Fort Reno has recently caused the discontinuance of the ice product at that place, much to the inconvenience of the whole garrison, ice having now to be procured from Kingfisher, at much trouble and increased cost to those able to purchase it. The extreme heat of that region and the bad character of the water supply taken from the south branch of the Canadian River render the use of ice an absolute necessity to those obliged to live at that station Much time and money has been expended in useless efforts to secure for that post a supply of good potable water Little progress has been made during the year in boring the artesian well, and it is questionable if success will result, as the depth to which it is to be driven is limited to fifteen hundred feet, twelve hundred of which have been bored without finding more than one indication of water and that is said to have been a saturated solution of gypsum

There were no active campaigns by the troops in the Department during the year, but companies from posts in the territories were frequently sent into the field to expel intruders from Indian lands and reservations In such cases, when practicable, the troops were provided with medical officers, detachments of the hospital corps, ambulances and medical supplies

THE MAN WITH TWO TONGUES

"Nay, said I, the gentleman is wise, certain, said she, a wise gentleman nay, said I, he had the tongues that I believe, said she, for he swore a thing to me on Monday night, which he forswore on Tuesday morning There's a double tongue, there's two tongues"—*Much Ado About Nothing*

We are accustomed to read curious accounts of wonderfully scientific discoveries, and extremely skillful surgical operations in the columns of our esteemed contemporaries the lay press, and occasionally a blood-curdling account of some new reptile or sea monster, a living calf with three heads, or a feathered freak with three legs, but it has been reserved for a reporter of one of the New York dailies to report the actual discovery of a man with two tongues, a condition which has always been figurative in literature rather than real The following is the paragraph

> "The Tenderloin District has developed a freak of nature puzzling to physicians William Senner of 237 West Thirty-First Street, an apparently healthy printer, with a wife and family, has grown a second tongue It is located just below the tongue he was born with, and is quite well developed and natural in its appearance Several physicians who have examined the growth think it is superinduced by constant pipe smoking Mrs Senner says it is a punishment for using profane language An examination will be made to day by physicians for the purpose of deciding upon an operation"—*New York Press*, October 28

We have no doubt that the physicians are very, very much puzzled but it is all owing to the failure of the reporter to enlighten them

The reporter having written up this remarkable case seems to have failed to embellish it as might have been easy to one of his expansive imagination He might, for instance, have stated as a probable cause of this new growth, that the patient, like the Prophet Joshua, "saw a tongue of gold and coveted it," and that the mental impression was so strong upon him that the new tongue immediately sprouted, or he might have said that Mr Senner had been attending the theater, and become so affected by the words of the Fairy in "Midsummer Night's Dream" "You spotted snakes with double tongue," sung in sweet soprano, or have been overcome by the deep bass of the tinsel Duke of York in "King Henry VI," shouting in staccato "This knave's tongue begins to double," accompanied by a threatening gesture of the ducal sword

It is apparent that our reportorial friend singularly failed in etiology He has also left us doubtful whether Mr Senner considers with Juvenal that "the tongue is the vile slave's vilest part," and knows that he can never, never become a deacon, for according to Timothy, "deacons must be grave and not double tongued," or whether Mr Senner would rather have two tongues, so that he might on a Sunday twilight on a visit to his sweetheart, wag both tongues at once, and like Romeo hear "how silver sweet sound lovers' tongues at night"

The reporter might also have indulged the play of his fancy by suggesting the treatment, and discuss whether, like Coriolanus, it were better to "pluck out the multitudinous tongue," and afterwards to supply its place according to the suggestion of Ambroise Paré by the manufacture of an artificial tongue of wood, or whether he would accept it as an additional charm, and say with Hesiod that "the best treasure among men is a frugal tongue, and that which moves measurably, is hung with most grace"

HOW VALUE OF PROFESSIONAL SERVICES MAY BE PROVED

In a suit to recover the value of professional services, witnesses of proper knowledge and experience may be called to give their opinions under oath as to the value of such services, says the Supreme Court of Colorado in the case of Bourke vs Whiting, decided Oct 2, 1893 But such opinions are not conclusive upon the jury, nor is it absolutely essential that expert evidence should be produced in such cases The jurors have the right, when the nature and kind of services performed are shown in evidence, together with the time and circumstances of performance, to exercise their own judgment in determining the value of such services, and, if parties submit such an issue to the jury without expert testimony, they will not afterwards be heard in complaint

A PERSONAL HYGIENIC EXHIBIT

The most prominent feature of an exhibit in the Section of Hygiene in the Columbian Exposition, was that of a large photograph of the chief of the quarantine over which he presided It is also admitted by certain newspapers, and as well by the modest individual himself, without the slightest effort to conceal the matter, that George Francis Train and himself are rivals in claiming credit for saving the World's Fair

CORRESPONDENCE

Minnesota State Board of Health and Vital Statistics

OFFICE OF SECRETARY AND EXECUTIVE OFFICER,
RED WING, MINN, Nov 6, 1893

To the Editor —I beg to report that a case of confluent smallpox has appeared in the person of a boy, Elmer Rogers, age 11, and unvaccinated, in the town of Featherstone, Goodhue County He is a resident, and at the time of exposure was traveling from Virginia through Pennsylvania, Indiana, Ohio, Illinois to Minnesota, so that it is difficult to say where, in those States, he took the infection I was called by the family Friday the 3d of November and found a well marked case of confluent smallpox, the eruption having begun on Monday four days before The attending doctor supposed the disease chickenpox A careful list was made of all persons who had visited the family since the preceding Saturday I visited, vaccinated and put under observation all who had been exposed since Sunday There are four other members of the infected family whom I vaccinated with fluid lymph from our vaccine station The house is roomy, isolated, and the patient well cared for

I, to day, vaccinate all who desire it, in that, and adjoining towns Very respectfully,

CHARLES N HEWITT, M D
Secretary and Executive Officer

Personal Ethics for Visiting Foreigners

To the Editor —As Mr Ernest Hart, editor of the *British Medical Journal*, has upon several occasions while in this country, delivered addresses on the code of medical ethics, would it not be in order for him to take up the subject of personal ethics? MEDICAS

NECROLOGY

Dr Kerlin, Superintendent of the Pennsylvania Training School for Feeble Minded Children, died October 22

Dr Isaac Simpson Hughes —Dr Isaac Simpson Hughes died November 2, at Springfield, Ill, aged 49 years

Dr Eli J Henkle of Baltimore, Md, died November 1, aged 53 years He was in political life in the Maryland Legislature and in the Federal Congress during the greater part of twenty years After leaving the Forty-fifth Congress he again entered upon the practice of medicine, becoming highly popular and successful

Dr William B Towles —Resolutions were adopted by the Medical Faculty of the University of Vermont at a special meeting held in New York, Oct 26, 1893

Dr William B Towles late Professor of Anatomy in the Medical Department of the University of Vermont, died September 15

The Medical Faculty, holding its first meeting since his decease at this time, and desiring to make some expression of its feeling with regard to this lamentable event, passed suitable resolutions

Alfred Ludlow Carroll—In Memoriam —The members of the Council of the New York State Medical Association deeply mourn the loss of their beloved, erudite, scholarly and gentle colleague, Alfred Ludlow Carroll, M D, who has labored so well and so assiduously for the Association, for the profession and for the people, as a wise councilor, as the editor of the Association's Transactions, as a prolific contributor of scientific material, as a promotor of the honor, dignity, and advancement of medical science, and as one of the foremost sanitarians in the land

The Council has therefore resolved that their high appreciation of the noble qualities and of the scientific accomplishments of their late gifted and lamented colleague be recorded in this volume of Transactions, and in the medical journals, and that a copy of the above be transmitted to the family of the deceased

E D FERGUSON, M D, Secretary

Done by the Council, Nov 4, 1893

Dr Alfred Ludlow Carroll of New York City, died October 30, in his sixty-first year He was a man of that fine fiber that finds its expression in artistic and literary labors He was an early contributor of satirical bits of drawing for the weekly press, commonly touching on the foibles of society, and while yet a young practitioner served as editor of the *Medical Gazette*, from 1868 to 1871, an able weekly journal, but long since defunct He studied medicine under the late Dr Valentine Mott, and obtained his medical degree at the University Medical Department in 1855 He practiced in Staten Island from 1871 to 1889, his earlier and later years having been passed in New York City He was among the sanitary pioneers of New York and an ardent supporter of the American Public Health Association He was a charter member of his State Medical Association contributing freely to its important discussions His membership in the AMERICAN MEDICAL ASSOCIATION dates from 1880, since which time his face has been frequently seen and his voice heard at the annual conventions He was health officer of Castleton, Staten Island, and for many years prominent in the management of the S R Smith Infirmary and Hospital He was a corresponding member of the British Medical Association and many other important societies

Dr John Scott Taylor —The death of Dr John Scott Taylor, which occurred on the first of October, 1893, recalls one of the saddest life histories in the medical profession Gifted by nature with a kind heart and active brain, he commenced his life work with unusual promise, and before the shadow came that darkened forever his career among men, had done duty that placed him high in the esteem of those who knew him

A Scotchman by birth, an adopted son of this country, he served during the entire war of the Rebellion successively as Post Surgeon, Medical Director, and Chief Operator of his Division, and gained high testimonials from official sources

He graduated at Lind University before the war, and after its close he returned to Chicago to establish his home. But his health had suffered during those four active years, and despite the efforts of his friends and physicians, Drs. Byford and Patterson, now dead also, his mind gave way He lingered twenty-four years in an insane asylum, having outlived his associates only to die there

He leaves an estimable widow and a talented son to mourn with us his loss to the world H T B

Sir Andrew Clarke Passes Away —LONDON, Nov 6 —Sir Andrew Clarke, the well-known physician, died at 4 30 o'clock this afternoon He suffered a stroke of paralysis several weeks ago

Sir Andrew Clarke, Bart M D, was born Oct 28, 1826 He was educated first at Aberdeen and afterwards at Edinburgh For two years he assisted Dr Hughes Bennett in the Pathological Department of the Royal Infirmary and was Demonstrator of Anatomy to Dr Robert Knox in the final course of lectures delivered by that celebrated anatomist For four years Dr Clarke had charge of the Pathological

Department of the Royal Naval Hospital at Haslar, where he delivered lectures on the use of the microscope in practical medicine In 1854 he took his degree of M D at the University of Aberdeen, settled in the metropolis, became a member of the Royal College of Physicians of London, and was elected on the staff of the London Hospital In 1858 Dr Clarke was made a Fellow of the College of Physicians, in which he held the offices of Croonian and Lumleian Lecturer, Counselor and Examiner in Medicine and Censor He had been also Lettsomian Lecturer and President of the Medical Society of London Dr Clarke originally intended to devote himself exclusively to the cultivation of pathology, but turned by the force of circumstances from the course on which he had entered he was long occupied in the work of a practical physician He was the author of numerous essays, lectures and reviews, the professional portion of which refers for the most part to diseases of the respiratory, renal, and digestive organs He was created a Baronet in 1883 He was senior physician and lecturer on clinical medicine to the London Hospital, an F R S, and LL D of Edinburgh and Aberdeen (causâ honoris), and consulting physician to the East London Hospital for Diseases of Children He held the offices of President of the Metropolitan Counties Branch of the British Medical Association and President of the Clinical Society Dr Clarke was Mr Gladstone's physician, and much speculation has been indulged as to the effect of his death on the Premier's health —*Press Dispatch*

ASSOCIATION NEWS

Change of Date of Meeting —Official Notice —In order to enable the State Medical Societies to send instructions as to their action upon the matter referred to them by the AMERICAN MEDICAL ASSOCIATION at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the ASSOCIATION at San Francisco, has been changed from the first Tuesday in May to the first Tuesday in June, 1894

WILLIAM B ATKINSON, Permanent Secretary
JAS F HIBBERD, President-Elect

How can it be Accomplished?—It is not only feasible but possible that the AMERICAN MEDICAL ASSOCIATION should in the near future be the grand central organization of the medical profession of the United States, and yield an influence that only a central body can, even as much as the British Medical Association does in Great Britain

There are too many societies under big sounding titles, which ought to be consolidated under some of the various sections of the AMERICAN MEDICAL ASSOCIATION We can not and do not believe that the medical profession, as a mass, want a half dozen national societies, for by so doing, all lose influence and power, not only in the profession but out of it It seems to us that the members of the AMERICAN MEDICAL ASSOCIATION are not active enough in doing missionary work in this direction among the members of the profession outside of this ASSOCIATION'S limits If an earnest effort were made in this direction we feel confident that a different feeling would be created, and a wider sphere of usefulness would be opened to the only real national medical association of the United States —*New England Medical Monthly*

SOCIETY NEWS

Executive Committee of the Congress of American Physicians and Surgeons —A meeting of the Executive Committee of the Congress of American Physicians and Surgeons was recently held at the house of the Chairman, Dr Landon Carter Gray, there being present Dr A L Loomis, President of the Congress, Dr H P Bowditch, representing the Physiological Association, Dr D B St John Roosa, of the Ophthalmological Association, Dr Abram Jacobi of the Pediatric Association, Dr P A Morrow, of the Dermatological Association, Dr Jas B Walker of the Climatological Association, Dr R W Taylor of the Genito Urinary Association, Dr W T Lusk of the Gynecological Association, Dr F J Shepherd of the Association of American Anatomists, Dr L McLane Tiffany of the American Surgical Association, Dr Wm H Welch of the Association of American Physicians, and Dr Landon Carter Gray of the American Neurological Association A local Committee of Arrangements in Washington was appointed as follows

Dr S S Adams, (Chairman) representing the Pediatric Association, Dr John S Billings, the Surgical Association, Dr H C Beyer, the Physiological Association, Dr S O Ritchie, the Otological Association, Dr S C Busey, the Gynecological Association, Dr W W Johnson, the Climatological Association, Dr J Atkinson, (Baltimore) the Dermatological Association, Dr Wm H Welch, (Baltimore) the Association of Physicians, Dr I C Rosse, the Neurological Association, Dr Samuel Theobald, the Ophthalmological Association, Dr D W Prentiss, the Genito-Urinary Association, Dr Frank Baker the Anatomical Association

It was arranged that the following subjects should be discussed by the Congress at its next meeting in Washington in the latter part of May, 1894

The Climatological Association "Sewer Gas," Genito-Urinary Association "The Surgical Kidney in its Clinical Aspects," Dermatological Association "Leprosy in the United States," Laryngological Association "Intra-Nasal Surgery," Gynecological Association, "Conservative Treatment of the Female Pelvic Organs, Neurological Association "The Effects of Infectious Processes on the Nervous System"

One Association is yet to select a subject for discussion

Dr W H Carmalt, of New Haven, Conn, resigned from the sub committee deputed to take charge of the organization of the Congress, and Dr Wm H Welch of Baltimore, was appointed in his place, so that the committee now consists of Dr A L Loomis, President of the Congress, Dr Landon Carter Gray, Chairman of the Executive Committee, Dr Newton M Shaffer, Secretary of the Executive Committee and Dr Wm H Welch

Centennial Medical Report —At the centennial meeting of the Hartford County Medical Association, held in Hartford in 1892, Drs John B Lewis, Gideon C Segur and Joseph E Root were appointed a committee to prepare and publish a report of the centennial meeting and a catalogue of all past and present members of the Association The members of the committee have worked long and faithfully, and the tangible result of their labors appears in the handsome volume of 160 pages just issued The volume is beautifully bound in white and green, and illustrated with eight or ten handsomely engraved portraits The frontispiece is a portrait of Dr George Oliver Sumner of Glastonbury, who became a member of the Association in 1833 After the full and accurate report of all speeches and papers at the centennial meeting, which contains much valuable historical matter, the feature of the volume is the catalogue of names The committee has succeeded in obtaining the full name of every physician who was ever a member of the society As the history of the society extends back over a hundred years, this was sometimes no easy task, and town records had frequently to be searched The volume will form a valuable souvenir —*Hartford* (Conn) *Times*

International Congress of Public Health —At the meeting of the International Congress of Public Health, held under the auspices of the American Public Health Association and the World's Congress Auxiliary of the World's Columbian Exposition, at Chicago, Oct 10 14, 1893, the following resolutions were adopted

Offered by Dr J E Monjarás of Mexico

Resolved, 1 That the educational authorities of the various nations represented here be requested to devote a longer time than they now do, in their curriculum, to the teaching of hygiene

2 That the governments of the countries represented at this Congress be urged to appoint to sanitary positions and commissions only such persons as may have acquired a special education in sanitary studies

Offered by Dr Benjamin Lee of Pennsylvania

Resolved, That the International Congress of Public Health affirms in the strongest possible manner its confidence in the value of vaccination as a preventative of smallpox

Offered by Mr Henry Lomb of Rochester, N Y

Resolved, 1 That this Congress urge upon the people of the countries here represented, the importance of completing our sanitary organization by forming voluntary Public Health Associations, to study for themselves the conditions of healthy living in the home and the community, and to afford efficient and persistent support to the work of public health officials

2 That this Congress respectfully ask State and local Boards of Health to assist in all proper ways the formation of such organizations IRVING A WATSON, Secretary

CONCORD, N H Oct 25, 1893

American Public Health Association —At the annual meeting of the American Public Health Association, held at Chicago Oct 9-14, 1893, the following resolution offered by Dr Henry P Walcott of Massachusetts, was adopted

Resolved, That the American Public Health Association again urge upon Congress the necessity of the appointment of some officer with general sanitary authority in connection with the National Government

That the functions of such an authority are of sufficient importance to demand the exclusive attention of the best instructed sanitarian

That such authority should be enabled, from time to time and under proper regulations, to secure the advice and cooperation of State Boards of Health

IRVING A WATSON, Secretary

SECRETARY'S OFFICE, CONCORD, N H, Oct 25, 1893

Union Medical Association —The eighty-ninth quarterly session of this Association will be held in Hollenden Hotel, Cleveland Ohio, Tuesday, Nov 14 1893

The program is as follows Lecture, "Pathology and Treatment of Injuries of the Pelvic Floor," Dr F D Brandenburgh, Essay, "The Doctor—The Surgeon," Dr J V Cleaver, Essay, "The Eye Symptoms of Brain Disease," Dr R D Gibson, Lecture, "The Significance of Glycosuria," Dr E J March Reports of cases will be given by Drs W E Wirt, C S Leonard, A C Brant, P Max Forshay, E O Portman, T W Johnson, Geo S Peck, T H Landor, Edward Prebel, H E Whelan

Topic for discussion, "How shall the requirements of aseptic and antiseptic methods be carried out in general midwifery practice?" Discussion will be opened by Dr T Clarke Miller, alternate, Dr L S Ebright

A B WALKER, M D, President
W W LEONARD, M D, Secretary

University of Georgia —The Medical Department of the University of Georgia is against the abolishment of the Board of Medical Examiners by the State Legislature, and make an earnest appeal that it be reestablished The professors of the Medical College adopted the following resolutions

WHEREAS, It is an indisputable fact that since the Board of Medical Examiners of Georgia was abolished by act of the Legislature, Georgia has been a veritable paradise for quacks who have been driven out of other States,

Resolved, That the Faculty of the Medical Department of the University of Georgia heartily indorses the principal features of the bill as printed in the *Atlanta Medical and Surgical Journal*, December, 1893, pages 612, 613 and 614, captioned "A Bill to Be Entitled an Act to Establish a Board of Medical Examiners for the State of Georgia, and to Protect the People from Illegal and Unqualified Practitioners of Medicine," which bill was passed by the Senate of Georgia at its last session

Resolved, That a committee of three members of this Faculty be appointed and charged with the duty of appearing before the Legislature of Georgia and using all honorable means to secure the enactment of said bill

Resolved, That this Faculty, through the said committee, requests the Senator from this Senatorial district, and the Representatives of the Lower House from this county, to exert themselves to secure the passage of said bill

Resolved, That this College points with pride to the fact that it was the first medical school in America to insist upon the necessity of higher medical education in the colleges of the United States This fact is shown first, by the record that in 1825 the first Board of State Medical Examiners was organized at the request of the Board of Trustees of this College, second, in the early history of this College the term was six months In 1845 the Faculty of this College attempted to have all medical colleges in America require of their students attendance on two full courses of six months each, as a requisite to graduation This Medical School only receded from its then advanced position, because forced to do so by refusal of all other colleges to join in the movement, no other college having expressed a willingness to join in the crusade against the disgraceful practice of yearly graduating large numbers of ignorant and unqualified medical students

Resolved, That it is, in the opinion of this Faculty, a blot upon the escutcheon of the State, to permit Georgia to be without a Board of Medical Examiners to protect her citizens against medical pretenders

Southern Surgical and Gynecological Association —Sixth annual meeting will be held in New Orleans, La, Nov 14 15 and 16, 1893

TUESDAY, NOVEMBER 14—MORNING SESSION

Address of Welcome and Response

Memorial Address on Dr Ephraim McDowell, L S McMurtry, M D, Louisville, Ky

Diagnosis of Pelvic Inflammatory Diseases, Howard A Kelly, M D, Baltimore, Md

The Treatment of Pyo-Salpynx, Cornelius Kollock, M D, Cheraw, S C

The Incision in Abdominal Section—How to Close it—Post-Operative Complications About it, Joseph Price M D, Philadelphia, Pa

Etiology and Treatment of Post-Operative Ventral Hernia, Chas A L Reed, M D, Cincinnati, Ohio

The Vaginal Method as Compared with the Abdominal in Operations on the Uterus and its Appendages, Geo J Engelmann, M D, St Louis, Mo

The Best Time to Operate in Appendicitis, A M Cartledge, M D, Louisville, Ky

An Extra-Peritoneal Method of Operating in Certain Cases of Appendicitis, Bacon Saunders, M D, Ft Worth, Texas

AFTERNOON SESSION

Intra-Cranial Neurectomy and Removal of the Gasserian Ganglion, with Report of Cases, Louis McLane Tiffany, M D, Baltimore, Md

Contusion of the Brain, J B Murfree, M D, Murfreesboro, Tenn

Trephining as a Cure for Traumatic Epilepsy, Jno T Chapman, M D, Bessemer, Ala

Some Remarks on the Treatment of Epilepsy, B E Hadra, M D, Galveston, Texas

A Contribution to the Study of the Prostate, G Frank Lydston, M D, Chicago, Ill

The Management of the Epicystic Fistula in Cases of Enlarged Prostate, J D S Davis, M D, Birmingham, Ala

Choice of Operations for Stone in the Urinary Bladder, W T Briggs M D, Nashville, Tenn

Supra-Pubic Cystotomy, B W Taylor, M D, Columbia, S C

WEDNESDAY, NOVEMBER 15—MORNING SESSION

Conditions Modifying the Prognosis in Gunshot Wounds of the Abdomen, A B Miles, M D, New Orleans, La

Treatment of Gunshot Wounds, with Report of Cases, W F Westmoreland, M D, Atlanta, Ga

How to Deal with Gunshot Wounds Safely Without Delay, W L Robinson, M D, Danville, Va

Laparotomy in General Surgery—Report of Twenty-two Cases, W B Rogers M D, Memphis, Tenn

Celiotomy, with Report of Cases, W H Wathen, M D, Louisville, Ky

Hypertrophy of the Omentum in Hernia, with Specimen, G A Baxter, M D, Chattanooga, Tenn

Wyeth's Bloodless Method in Amputation at Hip, F W Parham, M D, New Orleans, La

AFTERNOON SESSION

The President's Annual Address The Southern Surgical and Gynecological Association, Its Origin, Objects and Aims, Bedford Brown, M D , Alexandria, Va

Cancer, Its Etiology and Treatment, W L Rodman, M D , Louisville, Ky

Operative Procedures for Carcinomatous Tumors of the Breast, J McFadden Gaston, M D Atlanta, Ga

Wounds of the Bladder, their Recognition and Management, Richard Douglas, M D , Nashville, Tenn

Fibroid Tumors Complicated with Pregnancy, W D Haggard, M D , Nashville, Tenn

The Diagnosis of Some Abdominal Tumors Supposed to be Ovarian, Jas Goggans, M D , Alexander City, Ala

THURSDAY, NOVEMBER 16—MORNING SESSION

Rhinoplastic Operations, W S Elkin, M D , Atlanta, Ga

Sarcomata of the Peripheral Nerves, with Report of a Case, W O Roberts, M D Louisville, Ky

Division of the Cervix Uteri, H P C Wilson, M D Baltimore, M D

Some Experiments with the Galvanic Current on the Endometrium, H Berlin, M D , Chattanooga, Tenn

A Combination of Carbolic Acid and Camphor as an Antiseptic, Wm Perrin Nicolson, M D , Atlanta, Ga

A Case of Popliteal Aneurism, R M Cunningham, M D , Pratt City, Ala

The Present Status of Ureteral Surgery Arch Dixon, M D , Henderson, Ky

Operative Procedures for Calculi in the Pelvis of the Kidney, W E B Davis, M D , Birmingham, Ala

AFTERNOON SESSION

Two Unique Cases in Abdominal Surgery and Obstetrics, J P Moore, M D , Macon, Ga

Four Cases of Hysterectomy by Baer's Method, Jos Taber Johnson, M D , Washington, D C

Placenta Previa, George Ross, M D , Richmond, Va

Some Interesting Cases from Surgical Practice, F W Parham, New Orleans, La

Report of Surgical Cases, Wm H H Cobb, M D , Goldsboro, N C

Treatment of Stone in the Ductus Communis Choledocus, Wm E B Davis, M D , Birmingham, Ala

MISCELLANY

Dr Franklin W Hayes has been appointed a member of the Indianapolis Board of Health, by the Mayor of that city

Emergency Hospital at World's Fair —There were treated at the World's Fair Emergency Hospital, 18,500 cases, and there were twenty-three deaths at the institution

New Dental College —Tacoma, Wash , has a new dental college, which has been organized with a faculty of nine professors and four special lecturers It will give a three years' course to conform to the rules of the National Association of Dental Faculties

The Pacific Medical Record of Portland, Ore , is rapidly gaining the support of the medical profession of the Pacific Northwest It is published as a local journal only, and is not yet one year old, but it has already been indorsed by five State Medical Societies It is a stanch supporter of the AMERICAN MEDICAL ASSOCIATION, and will lend its influence towards increasing the membership and interest in that organization on the Pacific coast

Doctors' Bills as Debts of Honor —Strange as it may seem doctors' bills are said to be classed as debts of honor in Austria, China and Sweden They are therefore in those countries left as gambling debts are here, so far as the law is concerned, to be paid or not, according to the inclination of those incurring them So in England, unless the law has been very recently changed a *physician* (or one licensed by the College of Physicians) has no remedy at law for his services, but his employment is wholly honorary, though a "medical practitioner," whose legal appellation is usually "apothecary," has Indeed, it has there even been held that a physician, who prepared or dispensed his own medicines could not recover for them, although they were furnished to his own patients This may not, however, be entirely a disadvantage, because it is well known that such obligations are frequently paid where legal debts could not be collected.

A New Water Filter for Troops —Recent advices from Vienna speak of a water filter, the invention of a staff officer of the Austro Hungarian army, which after thorough trial by the Sanitary Committee of the War Office has been adopted and issued to the army Of these filters 12,000 are now in use by the troops at the corps maneuvers in Galicia, and are reported as being perfectly satisfactory The filter is made in two sizes, one the dimensions of the cavalry water bucket, the other smaller It contains two wire sieves, one resting upon the bottom of the bucket and the other suspended midway between the top and bottom A handful of asbestos is placed upon the lower sieve, and the bucket is hung over a cask or any suitable receiving vessel The water is said to pass through the filter perfectly clear, odorless and suitable for drinking, the pulpy asbestos absorbing the organic matter The upper sieve is intended to remove the coarser particles from the water, such as gravel, weeds, insects, etc , the lower sieve to hold the asbestos The latter can be washed and cleaned by hand and used a number of times. The smaller filters are constructed on the same principles. Each consists of a round piece of canvas of the size of a dinner plate, provided with a string around the edge to draw it to an orifice and hold a cup-shaped tin funnel The funnel contains two sieves and when it is to be used a small piece of asbestos of the size and double the thickness of a silver half-dollar, is placed upon the lower sieve

The Imperious City Druggist.—A writer in the *New York Herald* communicates the following pen picture of the lordly drug clerk and his ways of "just as good" substitution

"It requires some nerve and the display of an acute presence of mind to enter a drug store and inquire for a particular thing and to take no other thing in place of it Nobody understands better than the average drug clerk the feeble character of the human will, and nobody than he better appreciates his own superior position If I should go into an eating house and want frogs' legs and no frogs' legs were to be had there, nothing would be thought of the circumstance if I should move on to some other place for what I wanted Nobody would call out the rest of the force to stare at me Nobody would tell me I really didn't mean frogs' legs, but wanted to get a wholly different thing Nobody would sneeringly remark that they never heard of such a thing, that it wasn't down on the bill of fare printed for their house, and therefore frogs' legs were not in the market Nobody would, when I told them that I had seen frogs' legs in another restaurant, not far away, insinuate that I was mistaken or was lying Not at all They would merely permit me to go away and hunt up my frogs' legs and enjoy them wherever I might find them

"The average drug clerk is a very different sort of an individual to deal with Not to be too sweeping in this remark let me say some of these licensed practitioners on the public credulity are a trifle too smart for common everyday mundane affairs I have had them not only subject me to all of the above conditions, but absolutely go so far as to further relieve me from the strain of thinking to the extent of putting up something unasked for and by them pronounced just as good or better And I never found that peculiar method of doing business in all my varied dealings with my other fellow men There is food for philosophical reflection in this Now it is said that certain patent medicine firms of a competitive character offer pecuniary inducements to dealers for pushing goods on the market, and this will account for some of the peculiarities of the business, but it will not account for all of them Only the all-seeing One who graciously stands between us and morphin put up as seidlitz powders can do that"

The Maryland Medical Association will meet at Annapolis November 21 and 22 The Society will probably meet in the Senate chamber, as the Legislature is not in session

Wants $50,000 —Dr W R Amick, of consumptive cure notoriety, has sued Dr J C Culbertson for $50,000 damages for terming him a quack Dr Culberison is both plucky and lucky

To Reach the Doctors —The publishers of the *Medical News* a Philadelphia weekly issued at $4 00 a year, will shortly mail a copy of that publication to every physician in the United States and Canada, about 110,000 in all The publishers in their announcement say

"We not pretend to send out this large issue in the interests of our advertisers We publish a majority of the textbooks used in the various colleges, and every practitioner's library is also largely made up from our publications

"It is in order to place a catalogue of these books in the hands of the medical profession that we make this wide distribution, and, consequently, *we are ourselves by far the largest advertisers* No guarantee of the above statement as to circulation could be so strong as this fact

"Another important object to be gained is to obtain additional subscribers to the *News*, a matter in which our advertisers have a keen interest"

On presenting this announcement at the New York postoffice, *Printers' Ink* was informed that if such an edition was offered here it would be held, subject to the decision of the Third Assistant Postmaster General at Washington Being a Philadelphia publication, it is possible that the *News* has a permit entitling it to special privileges

It used to be supposed that what may and may not be mailed at second-class rates was fixed by law, but, under date of Feb 1, 1893, Hon James F Tyner, Assistant Attorney General, assigned to duty at the Postoffice Department, said

"Heretofore, and until within a few months past, this office considered and gave opinions upon such cases as were referred to it by the Third Assistant and in which he assumed there were questions of law *By the present practice, no questions in connection with publications of this class are referred to this office; for the reason that it has been held that all such questions are questions of fact and not of law*"

It has been made to appear that, under Mr Wanamaker's administration, valuable postal privileges were enjoyed by some persons, while others sometimes claimed that even their rights were not assured —*Printers' Ink*

New York Quarantine Methods —The following report on New York quarantine methods appears in the *Savannah News* of October 17

"The Norwegian steamship, *Lyderhorn*, which arrived up Sunday night, was sent back down to quarantine by Health Officer Brunner yesterday morning for disinfection

"The reason for this order of the health officer was a letter received from the inspector of the marine hospital service at New York, containing a copy of a report upon the vessel by the inspector to the surgeon general at Washington The information was sent to Savannah by order of the surgeon general

'The case of the *Lyderhorn* places the management of the quarantine service at the port of New York in a very bad light The letter received by Dr Brunner was from Dr J J Kinyoun, Inspector of the Marine Hospital Service at the port of New York He enclosed a copy of a report made to the Surgeon General, which he had been ordered to send to Dr Brunner Dr Kinyoun's report to the Surgeon General was as follows

United States Marine Hospital Service, Middle Atlantic District, Port of New York, Surgeon General's Office, Oct 23, 1893

Sir —I have the honor to report that a steamer called the *Lyderhorn* from Sourabya, Java, with a cargo of sugar, arrived in New York on September 30 On October 10 the vessel came down to the New York quarantine with the request from the agents, Funch, Edye & Co to have the vessel thoroughly disinfected in order that there would be no detention at the Savannah quarantine I feel it my duty to inform you what the process of disinfection was and what was done for the vessel The vessel was empty, one compartment containing considerable dunnage

The hatches were opened and a bucket containing about two pounds of a mixture of manganese dioxid and salt, moistened with water, was made ready to lower in each compartment Then sulphuric acid was poured over this mixture, and the bucket lowered into each compartment The disinfection, so called, was accomplished within twenty minutes, after which the vessel proceeded to sea About ten pounds of the mixture was used No disinfection of the apartments of the crew or cabin, in fact while the alleged disinfection was going on some of the men were at their breakfast in the forecastle

The health officer gave a certificate that the vessel had been thoroughly disinfected The fee charged for this was $10 00 Very respectfully "J J Kinyoun,

"P A Surgeon, M H S Inspector"

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from October 27, 1893 to November 3 1893

Lieut Col Johnson V D Middleton, Deputy Surgeon General U S A, leave of absence granted is extended fifteen days

Major Curtis E Munn Surgeon U S A, is hereby granted leave of absence for one month with permission to apply for an extension of two months

Major John O Skinner Surgeon U S A having been found incapacitated for active service on account of disability incident to the service is by direction of the President, retired from active service this date, Oct 26 1893 under the provisions of Section 1251, Revised Statutes

First Lieut Charles Lynch Asst Surgeon, is relieved from duty at Ft Omaha, Neb and ordered to Ft Robinson, Neb, for duty at that station, relieving Capt Edward Everts Asst Surgeon Capt Everts, on being relieved by Lieut Lynch is ordered to Whipple Bks Ariz, for duty, relieving Major Benjamin F Pope Surgeon Major Pope, on being relieved by Capt Everts, is ordered to Angel Island Cal, for duty, relieving Capt William R Hall Asst Surgeon Capt Hall on being relieved by Major Pope, will report for duty as attending surgeon Hdqrs Dept of California, and examiner of recruits at San Francisco, Cal

Lieut Col Henry R Tilton Deputy Surgeon General, is relieved from duty at Ft Wayne Mich, and ordered to Ft Omaha, Neb, for duty at that post

Major Louis M Maus Surgeon, is relieved from duty at Whipple Bks, Ariz and ordered to Ft Sam Houston Texas for duty, relieving Major Calvin DeWitt Surgeon Major DeWitt, on being relieved by Major Maus, ordered to Ft Leavenworth, Kan for duty relieving Major John Brooke Surgeon Major Brooke, on being relieved by Major DeWitt ordered to Philadelphia Pa to await orders

Capt Marlborough C Wyeth, Asst Surgeon is relieved from duty at Ft Supply, Ind Ter and ordered to Army and Navy General Hospital Hot Springs Ark, for duty

Capt Robert B Benham Asst Surgeon having relinquished unexpired portion of sick leave, is ordered to Madison Bks N Y for duty

First Lieut Harry M Hallock Asst Surgeon, is relieved from duty at Ft McPherson, Ga and ordered to Ft Bayard N M for duty relieving First Lieut Philip G Wales, Asst Surgeon First Lieut Wales, on being relieved by Lieut Hallock, is ordered to Ft McPherson Ga for duty

Capt H P Birmingham Asst Surgeon, leave of absence granted is extended three days

LETTERS RECEIVED

(A) American Medico Surgical Bulletin New York N Y Antikamnia Chemical Co, (2) St Louis Mo Atkins, E C Colorado Springs, Col Armstrong S T, New York N Y **(B)** Brayton, S H, Evanston, Ill Brayton, P B Syracuse, N Y Boylan J E Cincinnati Bettman, Boerne Chicago Ill Bulkley L Duncan New York N Y Breedlove J W Ft Smith Ark Brown M R, Chicago **(C)** Culhane T H, Rockford Ill Chaille S F New Orleans La Craig J W, Mansfield Ohio, Craig, C G Rock Island Ill Cory, A L Chicago, Ill Clark, J E Medford Mass Carson, W J Chicago, Ill Craven, S Belle, Toledo, Ohio Chapman B, Copley, Ohio **(D)** Dulin W E, Washington, D C Doliber Goodale & Co Boston Mass Dutton, C F Cleveland, Ohio Dunglison R J (3) Philadelphia Pa **(E)** Eastman, Joseph, Indianapolis, Ind, Eyster, Geo L, Rock Island Ill Ellegood, Robt Delmar Del **(G)** Garlock, C L, Ann Arbor, Mich, Greenly T B Meadow Lawn Ky Goelet A H New York N Y Gray, Landon Carter, New York City **(H)** Hart Ernest, London Hamburg-American Packet Co, New York, N Y Hibberd, Jas F Richmond, Ind Hummel & Parmele Philadelphia, Pa **(J)** Judson A B, New York City Jackson T B Unionville Mo **(L)** LaGarde Louis A U S A Longmans Green & Co New York, N Y Lincoln, D F, Geneva N Y Loeb, H W St Louis, Mo Launners B J, Louisville Ky **(M)** Mathews, J M Louisville Ky Morgan James D, Washington D C McGraw T A Detroit, Mich McGillicuddy, T J New York N Y Mully A J St Louis Mo Marcy H O Boston Mass McMurtry L S Louisville Ky, Montgomery E E Philadelphia, Pa, **(N)** Neely F T Chicago Ill Neier O C New Palestine Ind **(O)** Owen W C Newburg, Mo, Orum Julia A Philadelphia **(P)** Peterson F New York N Y Proctor & Gamble Cincinnati Ohio Park J W Hainsburg, Pa Peacock Chemical Co, St Louis, Mo **(R)** Reeves, Jas E Chattanooga Tenn Rebman F J London Eng Reinhard, Carl Milwaukee Wis Reed & Carnrick New York N Y Renz & Henry Louisville Ky **(S)** Smith, Frank Trester (2) Chattanooga Tenn Smith Jos R, New York Harbor, N Y, Scott D H, Chillicothe Ohio Stanton B, Cincinnati Ohio Stokes W B Coldwater Ky, Still D O Johnstown, N Y Stockwell, C M & C B Port Huron Mich **(T)** Trommer Extract of Malt Co, Fremont Ohio **(W)** Wilder, W H Chicago Ill Würdemann, H V, Milwaukee Wis White Jos A, (2) Richmond Va Watson, Irving A, Concord N H Wyckoff, R M, Brooklyn N Y

The Journal of the
American Medical Association

Vol XXI CHICAGO, NOVEMBER 18, 1893 No 21

ADDRESS

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION—ITS ORIGIN, OBJECTS AND AIMS

THE PRESIDENT'S ADDRESS

Delivered at the Annual Meeting, held at New Orleans, La, Nov 14 15 and 16 1893,

BY BEDFORD BROWN, M D

ALEXANDRIA, VA

Six years ago a small band of earnest, brave and determined Southern surgeons assembled in the city of Birmingham, Ala, with Dr Haggard as President, amidst doubts, anxieties and misgivings for the future, to found and organize a Southern Surgical and Gynecological Association, and in this effort to build up an organization that would meet the advanced requirements of the times, and that should rank in point of talent, efficiency and high-toned character with the other great institutions of the kind in this and other countries

Under the circumstances we fully appreciated the difficulties ahead of us, and measured accurately the herculean task that had to be accomplished Many of the most eminent and experienced surgeons of our section regarded the enterprise of doubtful propriety, while others equally distinguished believed that the object would never succeed

But notwithstanding the stupendous difficulties we had to encounter, the vast labor expended and the many obstacles in our path, the Southern Surgical and Gynecological Association stands to day a monument of energy, enterprise and indomitable will power

In launching forth this enterprise upon the world of science, we were anxious but hopeful for the future, and in laying the foundation of our Association with a view solely and alone to future success, regardless of prejudice, of individual opinion or interest we determined to begin in the right direction and continue so to the end

The first and most important question to settle was a leadership, and to be certain that no mistake could be made in the selection of a leader fully capable of steering the ship on its voyage, whether in calm or in storm, we wisely selected one of the most distinguished and eminent men in our profession in this nation, a man who by character, talent and reputation was in eminent degree qualified for the purpose We started out on our career in the right way, and I trust that, by the exercise of wisdom and discretion, we shall continue to prosper in the future as in the past

The next consideration of importance was the selection of proper material to compose this body In framing our laws to meet this important question, I think the Association has manifested wisdom, judgment and foresight They were so arranged as to admit to membership three distinct classes of professional men the specialist, whether surgeon or gynecologist, of distinction, skill and experience The second was the general practitioner of eminence and experience, who in addition practiced surgery and gynecology to a limited extent The third was the rising young surgeon or gynecologist of character, talent, education and promise, but whose practical experience was limited In this connection this term, *promise*, means a great deal Throughout our Southern country there are hundreds of accomplished young surgeons and gynecologists of *promise*, but not yet of eminence, who are struggling for success and who are certain to attain distinction, that this arrangement was made to reach These are the men who are coming forward to take the place of those of the past generation, and these are the future hope of our country

There never was in any land or any age so many young enterprising men of character, talent, energy and education as in our country at the present time It is to this class of young men of known talent and energy that this Association has extended the right hand of fellowship, and a free untrammelled invitation to unite in our work and responsibilities, and the act has been a wise, judicious and profitable one The individual or organization that has extended the helping hand of encouragement to the deserving, meritorious, energetic, struggling *young man* in fighting his way to success and eminence, has done a noble and generous act of humanity The time seemed propitious, then, for the organization of a Southern Surgical and Gynecological Association Circumstances demanded it and subsequent events have warranted it Since that period this Association, I am proud to say, has scientifically, intellectually and professionally become an integral part of Southern progress It is an evidence of Southern spirit, energy, enterprise, recuperative power and courageous determination to rise above its desolated condition and conquer success and prosperity, and it is typical of that noble and brave ambition which pervades our people, to restore this once impoverished land to a state of prosperity far beyond that of the golden past Twenty-five years ago the condition of the Southern people was desolate and impoverished, to a degree that no civilized nation of modern times has been reduced For those who had to begin the herculean task of restoring lost fortunes, and rebuilding a ruined country, the outlook was appalling and dreary beyond measure Since that time, well calculated to appal the stoutest hearts, our noble profession by its labors of humanity, charity, its cheering influences and brave example has exerted in Southern recuperation a powerful effect for good

That our Southern country might be enabled to reap fully the benefits of its talents, learning and labors, the organization of a home association for the development of surgery and gynecology was imperatively demanded, and this organization came in response to that demand In the progress of Southern affairs, in the onward march of improvement, in the advance of thought, in that vast wave of prosperity, which is now in progress throughout the land, this organization had become a necessity to the progress of surgery and gynecology among our Southern people And as time marches on, and future events reveal the requirements of our country, they will only serve to prove that the foundation of this Association came at the right time to subserve a great and pressing purpose The origin of the Southern Surgical and Gynecological Association was based on a necessity of the times Its object was the promotion of the progress of scientific surgery in the South, and its aim was the development of surgical talent and learning in our Southern profession In this direction I am impressed with the conviction that this Association, in connection with others, is doing a great and good work for our country All professions, in all times, and in all countries, need an active living stimulus to urge them on to energy and enterprise

Forming an opinion by my own individual experience, and by that of others, I am persuaded that no member who has followed the progress of this Association closely, and who has taken assiduous part in its proceedings, whose knowledge of the science of surgery has not expanded, whose ideas have not been enlarged by the able papers and discussions that have characterized our transactions The character, reputation and vast experience of many of the surgeons who compose this body, and the splendid work they have performed are in every particular worthy of the great Southern people, and would be an honor to any people or nation on earth

Throughout our sparsely populated Southern country there is a large class of general practitioners, many of whom are good surgeons and gynecologists, men of reputation, of education, experience and standing in their communities and States, whom it was designed to bring into active sympathy and cooperation with the work of this institution This is a meritorious class of men in every respect Their services as surgeons are of infinite value to our Southern people, and their influence as men of refinement and moral character are equally valuable as a high-toned honorable example

But, unfortunately, this class of men were absolutely debarred from sharing the privileges and advantages of the exclusive special associations of the country All professional associations, however exclusive, open their doors widely to men of national or world-wide reputation Men of great talent or reputation are, as a rule, always welcome to such associations But it is very different with the two classes alluded to in the foregoing pages The doors of the great national associations of specialists are closed and barred against those two classes of professional men, however meritorious may have been their lives, provided they have not reached the climax of professional reputation I am happy to say that the organization of this Association is based upon broader, more liberal and more democratic principles

Our laws and our principles require that all whose names are inscribed on the rolls of this Association shall be men of honor, of character and standing, of education, of talent, of experience and distinction

In this way we have brought together and united in one compact, harmonious working body the skilled and illustrious specialist, the educated, experienced general practitioner, who includes in his work surgery and gynecology, and the educated young surgeon and gynecologist of talent and promise We believe that this arrangement subserves the purposes and requirements of our Southern people better than any other We believe also that the influence of such an arrangement will tend more certainly to build up the interests of surgery and gynecology in our section, and at the same time to advance the interests of the medical profession in our Southern States, than if we had organized an exclusive association of specialists In this great work we must ever bear in mind the fact that our labors, means and time are being expended, not only for the benefit of science generally, but also to aid in the cause of Southern restoration and recuperation, educationally, intellectually and scientifically

Scientific bodies, whether medical, surgical or otherwise, are in all intents and purposes educational and instructive, and their management, principles and work should be so arranged as to conduce to these objects in the highest degree The professional association and journal are both exerting a powerful effect in promoting the cause of medical science They are the progressive allies of the medical college in the art of teaching medicine They are both great and necessary mediums for the interchange of thought and opinion, and for the publication of that which is above all things the most useful and indispensable, whether to the experienced or inexperienced—the results of practical personal observation and investigation Pure science without experience is simply impractical theory Simple experience without the light of science is but little better than profitless rubbish

It is this admirable combination of scientific learning and culture, and ample and well-regulated personal experience that gives to the work of this Association such force and effect in our profession It is the friction of mind with mind, the interchange of thought with thought, idea with idea, that stimulate intellectual effort and development, and add to the accumulation of knowledge

The conservative character and mission of the Southern Surgical and Gynecological Association affords a field for the liberal interchange of thought and opinion that none other does It is a school for imparting and receiving practical knowledge that is unrestricted and untrammelled

In every section of our country, accomplished surgeons are springing up who are prepared to practice surgery scientifically and successfully It is in obedience to this rapid increase of surgeons and gynecologists that this Association was founded There was a period when a single surgeon could control the practice of a great section or State It is no longer thus The unlimited avenues for the acquisition of medical knowledge have wrought a wonderful change in this respect I will not say that education is leveling all things, but I will say that education is elevating all things moral, intellectual and material

I regard this Association in the light of an organized institution for the acquisition of a practical knowledge of surgery and gynecology To so construct it as to make it an organization where practical experience alone is taught, was one of the principal aims of those who founded it We need in our Southern country, practical men, practical ideas, practical methods and knowledge This is eminently a practical age, and in this respect we have endeavored to adapt the working of this organization to the practical wants of the times Ever bearing in mind the great principles of honor, right, justice and truth, let every man, whatever profession or vocation he may be destined to fill, labor to make our Southern people a practical people, a useful people and an honorable people Practical employment is the great and pressing need of the hour and times In restoring the prosperity of our country, in rebuilding our great and valuable interests, nothing but practical methods and means will succeed We believe that in furthering these great and vital questions that we, as a profession, with our present practical methods of research, observation and investigation are by example and practice contributing our influence towards Southern recuperation and restoration But we are not only engaged in a great and important practical work We, at the same time, have not forgotten the refined amenities of personal association

The interchange of thought and opinion between the members of our Association, different from that of some others, has never been trammelled or embarrassed by acrimonious controversy or harsh criticism On the contrary, our discussions have ever been conducted in a spirit of manliness, high-toned gentlemanly bearing, and a courtesy that has ever characterized our proceedings. In this way, thought has ever had a free range, and it has been the means of developing a freedom of opinion that has exerted a most happy and beneficial influence over all Courtesy in our intercourse, kindliness to all, a due respect for the rights of every individual member, in their results are not limited to the personal gratification they afford at the moment, but looking far into the distant future we see the working of these charming influences in engendering delightful memories that we have acted our parts as men of honor and humanity

The memory that we have treated our brother kindly, magnanimously and generously will do to carry with us down the rugged path of life Recurring again to the beneficial influence exerted by medical associations on medical progress, I do not hesitate to hazard the statement here that the Medical Association of my own State, Virginia, has accomplished more to raise the profession of medicine in that State, up from its condition of lethargy, depression and helplessness resulting from the wreck and ruin of war and restore it to energy, life and prosperity, than any other single agency No one can fully realize or appreciate the grandeur and importance of this work, and its valuable results but those who are familiar with the black hopeless chasm of despair into the gulf of which our people had sunk after the late disastrous war Then how much cause have those who expended their time and means and have toiled and persevered in past years, often against opposition, discouragement and difficulties, to congratulate themselves on the splendid results of their labors, and to feel proud that they have borne an honorable part in this great and noble work The diffusion of useful and practical knowledge, the education of the human mind, and the elevation of human thought are among the grandest of human missions, and rank in their glorious results almost equal to, and but little less in importance, than the propagation of the gospel of Christ

Then let us not under-estimate the importance of the aims and objects of this Association They are not limited to the pleasures of reunion, neither are they confined to the mere advancement of individual interest or the gratification of personal ambition They rank far beyond the limits of these considerations We are building up surgical and gynecological science We are adding our mite to the accumulated experience of ages We are engaged in the stupendous work of making surgical history Whatever is said or done within the confines of this Association, will be impressed on the pages of the medical history of the world and must go down to posterity and bear the test of enlightened criticism Will the character of our work bear the sharp and rigid criticism of the cultivated, enlightened and searching opinion of the scientific world? I believe that it will I believe that the character of the work of this Association will rank in point of scientific value and professional merit with that of any other organization of the kind Medical and surgical associations have multiplied with extraordinary rapidity in the past few years Have the results of this vast increase in medical associations proved favorable or unfavorable for the cause of medical science? I believe that it has been for the good of medical education and progress It indicates the development of a spirit of inquiry, of research, a desire to impart and receive information, and a laudable ambition for advancement that augurs good for our country The Southern States, six years ago, were absolutely destitute of a surgical or gynecological association This, when considered in connection with the large number of talented, experienced, and promising surgeons and gynecologists in that section is a remarkable fact

These Southern surgeons and gynecologists scattered over vast and sparsely populated sections, men of talent, character and education, had no association of the kind on earth with which they could unite Their reputations were not such as to entitle them to fellowship in the great associations of specialists in our country This had become a serious question in the medical profession of the South There seemed to be just at this period a consensus of circumstances, a fitness of things, a tide of professional sentiment and opinion which proclaimed to us in strong and unmistakable language that there was a demand and a necessity for an association, based upon principles of surgery and gynecology, coextensive with the interests of the medical profession of the South, but at the same time one based upon more liberal and broader principles, and more suitable to the requirements of the Southern people Were these meritorious and deserving men to be forever excluded from all participation in associations of this character, and debarred from all their advantages, pleasures and profits? No The time had arrived in the accumulating necessities of the age, when talent demanded a fair, unobstructed field for action

Intellect in its height, depth and immensity is godlike, and it is a God-given function to be cultivated, developed and used for the good of the human race, and it is our imperative duty to give it a generous and liberal encouragement When for a moment we pause and reflect on the wonderful development of talent, the extraordinary acquisition of knowledge, and the marvelous progress of medical science in our land, it is not difficult to realize the fact that the rapidly growing and expanding medical talent of the South called for and demanded a new organization, to meet the rising emergencies of the times

The origin, objects and aims of this organization must be regarded in a broader, wider and far more important light than the mere founding and building up of a professional association under ordinary circumstances The state of the medical and surgical sciences is inseparably associated with the moral, intellectual and material progress of countries and nations At the conclusion of the late civil war, the condition of the Southern States was, in many respects, similar to that of a people just beginning a new life, but bereft of everything, material and immaterial, for the reorganization of society The medical profession ever brave, ever earnest and ever determined, was among the earliest, in this gloomy and discouraging prospect for our country, to indicate signs of recuperation Since that sad period in our history, the onward progress of medical science in the South and the process of Southern recuperation have advanced, hand in hand, shoulder to shoulder, and are linked indissolubly in destiny When medical science declines and falls, in this or any other nation, then civilization and national prosperity will go down with it Medical science enlightened cultivated, pure, constitutes one of the strongest pillars of civilization and national refinement And though our people were left, after a disastrous war, impoverished and desolated, they still clung to their civilization, their religion, their medical and legal learning

No nation, no people can ever rise high in the scale of enlightenment and prosperity without an enlightened knowledge of medical science It is one of the earliest indications of national progress, and one of the earliest to indicate national decline and decay In founding the Southern Surgical and Gynecological Association, I believe that we have accomplished a noble and commendable work It was an important duty that we owed to Southern recuperation and prosperity, and in laboring to strengthen medical science in our country we are bearing our part, however insignificant it may be, in the grand cause of civilization and enlightenment We stand here in the relation to each other of both teachers and learners We instruct and are in turn instructed The very nature, the pith, the leading principle and object of this Association is *educational* Its chief aim is to aid in the cause of developing enlightened surgery and gynecology in the sparsely populated sections of our Southern country If, in our efforts we have been the means of conducing to this end, then our labors have not been in vain

The medical and special associations of our country I regard as an important and indispensable part of the educational system of the nation, and none are doing more efficient or valuable work for the promotion of this cause than this Men of eminence, distinction and vast professional opportunities fresh from great and almost unlimited fields of practical experience meet here on common ground, rich and ripe in knowledge acquired from active practice, and each willing and ready to impart to the other, valuable treasures obtained from practical observation

While the Southern Surgical and Gynecological Association is supposed to be composed exclusively of specialists, as its name implies, this is not a strictly correct idea of its character If it were so constituted it would fail to meet the requirements of the Southern people It is in reality composed of two distinct but harmonious elements—the skilled and learned specialist and the minor surgeon and gynecologist I believe, as previously expressed, that the latter is at this time a necessary element of Southern society as at present constituted The chief advantage of this arrangement is that the skilled specialist becomes the teacher of the minor gynecologist He instructs him in that most important art, a correct knowledge of the true distinctions between the requirements of major and minor gynecology To have attained to a clear and scientific understanding of the art of knowing when a given case demands surgical interference, or when conservative treatment only is required, is arriving at a state of perfection that the most learned might envy Both the major and minor gynecologists should, by all the means in their power, strive to attain this facility or art of differentiation in this particular, as being the basic principle upon which all safe surgery depends

The learned and skillful specialist occupies a position in this Association of infinite importance and usefulness, his relations here to the minor gynecologist are equally fortunate and favorable, and his influence for good is invaluable There can not be skilled specialists in every town and village in our country, but there are thousands of diseased females who require attention but are not proper subjects for surgical operation, and who have not the means to enter a sanitarium for treatment There are this day hundreds of educated physicians practicing minor gynecology among this class who are doing a good and meritorious work Let us not under-value the merits of an intelligently and skillfully practiced minor gynecology If there is any good in it, let whatever is good be sifted from that which is worthless and estimated at its true value I believe that minor gynecology has its proper place in the science of general gynecology

The appearance on the stage of medical progress, of the skilled specialist, has been one of the glories of the present generation It is one of those brilliant and splendid advances in civilization that appears only at rare intervals in the progress of science It marks a tremendous stride in the onward march of our profession Medical and scientific knowledge and learning were pressing on the human brain so forcibly and powerfully as to demand more room, and a wider field for action, and specialism came for the accommodation of this marvelous increase of knowledge

Forty years ago there appeared on the scene of American surgical science a man whose splendid genius blazed forth in all the brilliancy of the gorgeous and glorious sun of the summer morn He came from poverty and obscurity He came unheralded, unpredicted and unexpected Rarely has it been the fortune of any man to make such impression on professional opinion and practice He was a native of our Southern land, and it was in that warm, genial and sunny clime that his genius was born. It was that grand and superb man whom we all loved and admired, the great Marion-Sims, *the ideal specialist*. His life was a beautiful picture to contemplate, of lovely character, of attractiveness of person, of innate modesty, elegance of manner, a charming, fascinating voice, united with the grandest order of genius and strength of intellect. He was, in all the relations of life as a man, a great surgeon, as a humanitarian and speaker, one of the most splendid of his race. His appearance on the scene of surgical science marked an epoch in the history of surgery, not only in his own country, but throughout the universe. Marion-Sims was truly a great man. He originated ideas, thoughts and practices that revolutionized the opinions and methods of an age, and that must impress themselves on the current of surgical progress for all future time. It was not the borrowed, purchased or surreptitiously acquired reputation, but the glorious genius of nature, bursting forth and unfolding itself as circumstances and opportunity called it into active life. The man who can turn the great strong tide of human thought from the depths of doubt, uncertainty and darkness, into the clear golden light of truth, reason and certainty is nothing less than a heaven-born genius.

We, of the South, have a just right to feel proud of the genius and greatness of Marion-Sims. We are proud that he was born on Southern soil. But at the same time we are proud to call him an American citizen, an honor to his country and age. Nothing but the demands of absolute necessity brought forth the specialist in modern gynecology. Sims was the forerunner, the pioneer who made it reputable, who made it great and launched it on its road to greatness and power. Medical science had grown too vast, too complicated for any single mind to grasp or practice. The time had arrived for a division of labor in our profession, and the rapid development of medical science imperatively demanded it.

In the economic arrangement of all things there seems to be a tendency to a division of labor. We observe this tendency in the arts, manufactures, sciences, in commerce, and in nature's great field of operations we see this principle at work busily and unceasingly, and as we near the goal of perfection in medicine, specialism or a division of labor, will be drawn finer and closer as we progress. If the division of labor has been a means of developing art, mechanism, manufactures, then there is no good reason why it should not become a means of developing medical science also.

The progress in medical and surgical science in the past twenty years has astounded the civilized world. We, who are engaged in its daily study and practice, behold its wonderful advance with astonishment. These wonderful changes have been wrought largely through the advantages of a division of labor. For ages the advantages of a division of labor were unknown and unrecognized. Hence the progress of medicine and all other sciences and arts was slow, uncertain and often retrogressive. So long as a single mind attempted the impossible task of grasping all things there could be no progress.

But while untold benefits have resulted from a division of labor in our profession, in developing the various great specialties and in the attainment of their wonderful power and perfection, this vast influence may prove a source of danger, and specialism may in its exalted position become domineering, intolerant, nay radical, and run into the extreme of exclusiveness and narrow-mindedness. I am happy to say that in the construction of our organization there is a conservative element, a balance wheel that will protect us against these untoward dangers.

All organized bodies, in their struggle for the attainment of success and the maintenance of that supremacy that comes from success, may in certain particulars be compared to individual enterprise. When by a long course of toil, perseverance and good judgment the much coveted goal of success has been at last attained, and the very pinnacle of hope has finally been reached, and we stand apparently on a firm and solid foundation, and then can take a retrospective view of the difficulties of the past, and look the future in the face with confidence and composure, and satisfy our minds that all has been accomplished that ambition, hope, and expectation could desire, then we already stand on dangerous ground. It is as difficult in the affairs of this world to maintain success, as it is to attain it.

You and I have toiled for years to build up this admirable and noble institution, the pride of our profession. Let us, with equal ardor and earnestness labor to maintain it in its integrity and power, and to perpetuate it for all future time. We stand here as an organized band, united in purpose to promote the great and glorious cause of surgical science, with this single aim in view, congenial in sentiment, united in friendship, strong in the confidence of each other, determined to give our time, talent and energy to the great work before us.

Forty-five years ago the medical history of female diseases was in a state of primeval simplicity, and it was the simplicity of profound ignorance. It was then confined usually in the concluding pages in some work on obstetrics to a description of prolapsus uteri, leucorrhea, amenorrhea, dysmenorrhea, menorrhagia, cancer uteri and metritis. Now the literature of gynecology is sufficient to fill a respectable library, and the work is of sufficient magnitude as to occupy the most splendid minds of our day for a lifetime. Such is the importance of her who is the loveliest of all God's creation, and such is the vastness of her peculiar diseases.

The change that these forty-five years have wrought is marvelous and astounding, even to us who make the science an object of daily thought and observation. Surgery has taught gynecology much, but gynecology has repaid surgery with full measure. The gynecologist taught the surgeon the invaluable lesson that the abdominal cavity could be opened with impunity, and its organs exposed, handled and treated successfully. The grand lesson was taught in the wilds of Kentucky more than seventy years ago. Every year of our progress, gynecology is becoming more and more a part of surgery, until it would seem that the two would become ultimately blended into one vast science. Nevertheless, I am impressed with the conviction that there are two natural divisions of gynecology, based upon actual and real phases and conditions of disease, the major and minor forms of the science, and that the lines between these two divisions can never be obliterated. History indicates that the science of medicine is replete with remarkable changes, sometimes advancing and at others receding. Sometimes following new ideas and theories with intense zeal to extreme results, and again abandoning what appeared to be fixed principles and practices and then retracing its steps returns to old opinions long discarded

Our profession is steadily advancing, but it does not progress in a direct line forward However apparently well grounded and firmly fixed may appear our ideas and principles of to-day, they may be overturned by others equally plausible, and set aside tomorrow We may not be surprised if principles which appear to us to be settled for all time should in a few brief years be rejected as untenable But without a scientific knowledge of the principles of sepsis, as a cause of disease, and antisepsis comprising the means of correcting diseases, this Association and others of its kind would not now be in existence Sepsis is no longer an idea or a theory It is an established fact, and has come to remain with us for all time It has made surgeons and gynecologists of us all Men who were formerly timid and hesitating about using the knife on any occasion now dare use it at every opportunity We are naturally inclined to ask this question, When will this thing end or has it any end?

There is at the present time a larger degree of talent, absolutely and relatively, of education, of learning engaged in the study, observation and practice of medicine in its various branches throughout the civilized world, than in any other single subject This is in wonderful contrast with the state of medicine two or three centuries ago We can now, without emotions of shame or reproach, look the world squarely in the face and with pride and justice proclaim that modern medicine is a science Twenty years of the present time can bring forth more for the enlightenment and civilization of the human race than five centuries did a thousand years ago

In conclusion, I desire to make some passing allusion to the alleged sectional character of our title and purpose, "The Southern Surgical and Gynecological Association" Those who founded this Association never entertained the remotest idea or intention of organizing it or using it for sectional purposes They believed that the necessities of the medical profession of the South demanded and required such an institution based upon broad, liberal and democratic principles open to merit, talent, and character for the encouragement of medical progress in that section

No! We are of all people the least sectional We are a band of workers linked together, working with one mind, with the single purpose, the noble object of promoting the sciences of surgery and gynecology We know no politics, no political distinctions We do not even know the political opinions entertained by each other We are composed of ardent spirits in search of scientific knowledge from the far North, the distant West, the East and the South, that mingle together on perfect terms of equality, in social pleasure, and in a spirit of kindliness and mutual confidence There are those here mingling together in friendly intercourse who took part in the great struggle, and who stood arrayed against each other in bloody array, now united in friendship and engaged in the humane office of devising means for alleviating human suffering and prolonging human life The scene, as it presents itself to my mind, of men with one single and grand and glorious object working together harmoniously, congenially, trustingly, forgetting all differences of opinion, political and social, each ready to make sacrifices for the other and for the good of the cause, presents a sight truly noble and worthy of the greatest admiration

To those illustrious and distinguished men who have at our invitation come from the great cities of the North—Boston, New York, Philadelphia, Buffalo, Chicago, Cincinnati and St Louis, and united their destinies with ours and are sharing with us our toils and responsibilities, I have only words of admiration, commendation and kindliness I, for one, thank them for the noble, distinguished and unselfish part they have borne in laboring with us to build up the cause of medical science in our once impoverished Southern land, and I can in all truth and sincerity assure them that their association with this institution has not only redounded to its welfare and profit, but has brought about a friendly and kindly relation and engendered charming and delightful memories that I trust may go with us through all the vicissitudes of life and end only when life itself is no more

And finally, in the concluding sentences of this address we can, in all truth, congratulate ourselves that we have arrived at a stage of the progress of this organization where we can look back and take a retrospective view of our work for the past six years, and see the good results of our labors, and observe the growth of this Association from a small beginning to a great and influential body, representative of the Southern profession, and respected not only by the people of the South, but by the entire profession of this great Union How has this eminent position in the estimation of the profession of our country been attained? This great and desirable end has been accomplished solely and alone by a strict and unswerving adherence to the inflexible principle, that no man can gain admittance to a membership of this Association who has not an unblemished character, who is not a gentleman of honor and probity, and who does not possess professional attainments That Council of Five, which is so strong and valuable a feature of this Association, has ever been the watchful, the faithful and incorruptible guardian of the interests, the rights and the welfare of this institution, and they have unswervingly protected it against the entrance of men unfit to become the associates of gentlemen of honor and attainment

Gentlemen, this is the basis, the foundation of all great and prosperous institutions However brilliant and splendid may be the intellectual features of an institution, if it is corrupt, is low in its standard of character, if it hath not honor, purity and refinement it can not stand the test of time Then let us hold to that invaluable principle which has given us strength, influence and prosperity, which has made us what we are to-day, a great and respected body, whose portals no man is permitted to enter without an unblemished reputation Let us but determine to maintain this high standard of qualification which has been the established rule of our action in the past, and the future success and prosperity of this Association is assured, and it will take rank morally and intellectually with the greatest association of the kind on earth But if the day should ever come when this high standard for membership should be lowered, then our reputation and standing in the estimation of the world will be trailed in the dust, and the Southern Surgical and Gynecological Association will no longer command or deserve the respect of an honorable profession

THE RELATIVE VALUE OF THE OBJECTIVE AND SUBJECTIVE SYMPTOMS OF DISEASES OF THE UPPER AIR PASSAGES

CHAIRMAN'S ADDRESS

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association

BY E L SHURLY, M D
DETROIT MICH

It has been the customary duty, I believe, of the Chairman of a Section to present an epitomized review of the new facts and new thoughts evolved during the year, pertaining to the department of medicine or surgery, in this ASSOCIATION, to which he belongs As highly useful and edifying as this plan has been in the past, I doubt its utility at the present time when medical literature is so widely distributed, and accessible to every physician in the land Therefore such a compilation would of necessity fail to edify such a body of men as are assembled here

We are aware that one of the crying evils of the present time is too much medical literature, and possibly too many medical journals However this may be, it is doubtfully an evil, and if so will properly adjust itself in time The fancied harm arising from a journal article or even a text-book on the practice of medicine, or any department of it, such as diseases of the throat, which may be written by a very recent graduate is likely to be very much over-estimated It may do the author or compiler much good as an educational measure, while the reader will not long be influenced by its lack of practicability, particularly if he has had some experience Besides, the time of "rules of practice" in any department of medicine has about passed away Speculative thought is disappearing before the rapid discoveries of physiologic, biologic, pathologic, and chemic discoveries, and consequently the practice of medicine and surgery is approaching a state of exactness And the practitioner, like the navigator, shapes his course under the guidance of charts and observations based upon the developments of nature herself

Coming to a consideration of the work of our own Section, and sparing you a dissertation upon the fashionable topic, viz the general practitioner vs the specialist, I will invite your attention briefly to a few thoughts on the relative value of the subjective and objective symptoms (including visual observations) of diseases of the upper respiratory passages

Every one who has used the microscope very much or practiced exclusively in any particular field, will admit that without due care a tendency will arise to exaggerate local appearances and symptoms, to the exclusion of other and more general bodily ailments, in other words, as Josh Billings expresses it ' To know too much that isn't so" This failing may occur to the best of minds, and it seems to me may become a serious hindrance to real medical progress in more ways than one

The glory from cauterizing a couple of apparently swollen, and red, turbinated bodies should be promptly swamped by the further observation that the patient does not suffer from nasal stenosis or excess of secretion over what might be expected, under the circumstances of climate or surroundings Although such operation may for the time relieve a headache, "a spell of insomnia," "nervousness" or apprehension of a "horrid catarrh," yet little satisfaction will be yielded the practitioner a year or two afterward, when he observes that the former symptoms have returned, with possibly an unrelenting sensation of dryness with sneezing, or other discomfort superadded

Many such cases, therefore, could be treated far better by attention to the stomach, bowels, habitat or habits of such a patient Neither will it be considered necessary to saw off every deflection of the nasal septum met with, when we consider how many people go through a tolerably healthy life to a good old age, with a nubbin, angle or convexity on the side of their nasal septum There are many persons presenting one or other of these local abnormalities, who, as we know, are much sooner restored to a normal condition without the adoption of such heroic local treatment

Many of the published instances of brilliant cures of hay fever, chorea, insomnia neuralgia, persistent cough, asthma, etc, brought about by cauterization or operations—such as sawing and drilling—of the tissues of the nasal passages, lose their brilliancy a short time afterward when the effect of the counter-irritation has passed off, and a complete relapse of the symptoms occurs, and the connective or fibrous tissue formation, replacing the destroyed mucous membrane or cartilage proves a still greater annoyance to the patient Likewise many of the various complaints relating to the pharynx and esophagus—such as fullness, frequent acts of swallowing, pain referred to this region, continual spitting of saliva or mucus, and supposed difficulty of swallowing, sensation of dryness, or of a foreign body (such as a stick, pin, bristle, and frequent sneezing, may be entirely due to derangement of other parts of the body or the nervous system—notwithstanding the presence of enlarged follicles on the walls of the pharynx or at the base of the tongue, or a so-called ragged tonsil An experience of my own, will illustrate this point

A case of well-marked follicular pharyngitis with enlargement of the glossal papillæ was under my professional care for a number of months Cauterization with the galvano cautery and chromic acid was carefully practiced upon the abnormal follicles, and rigid attention given to diet and hygienic surroundings But, notwithstanding all this, the patient continued to complain about the same, if anything a little more After a time hoarseness gradually supervened, and the patient grew apprehensive, while I was beginning to despair I had made a thorough examination of the chest several times, but could find no lesion of the lungs nor auscultatory evidence of any enlargement of the mediostinal glands Finally, I found upon a subsequent critical examination of the person a fissure of the anus, which the patient had scarcely ever complained of Upon treatment and cure of this fissure, all of the throat symptoms quite rapidly disappeared, although for some time there remained what seemed to be a congestion of the pharynx and upper larynx. Another case, of quite severe rhinitis, covering a period of several months which seemed to defy all treatment, conservative and radical, was effectually and quite rapidly relieved in a patient of mine, by the treatment of the skin with soap baths, which plan I was led to adopt by the discovery that the skin was continually dry, lacking in oil and flexibil ity Still another instance was that of a patient suffering from chronic coryza with nasal stenosis, (from enlargement of the turbinated bodies) and excessive nasal secretion, who was not relieved materially by cauterization, etc , but was effectually restored to health by a few consecutive doses of blue mass, administered on account of the observation of symptoms indicating so called torpidity of the liver This patient has never had any return, to my knowledge of this troublesome rhinitis excepting such as all persons living in the Northern States are apt to have during the changes of weather incident to the spring and autumn seasons

It may be considered by many that in these cases the previous local treatment had some good effect, while, undoubtedly, some credit might justly be given to the local treatment adopted, yet I do not see how to avoid the logical conclusion that the nasal and pharyngeal disease, from which these patients suffered, depended mostly upon a faulty systemic condition

It is often difficult, I know, to discriminate between the direct and indirect causes of such signs as before mentioned While structural change or functional derangement of the nerve centers may give rise to such symptoms referable to the region of the throat, yet there are undoubtedly many peripheral lesions which are the result of affections in some one or other of the organs outside of the nervous system, as well Besides, we must not overlook the fact that chemic and biologic derangements may be manifested in this manner, for we frequently find patients suffering from oxaluria, who complain of abnormal sensations in the throat such as fullness, constriction, persistent cough, or who may indeed show signs positively of congestion of the nasal passages

It is not infrequent in the early stages of Bright's disease, and diabetes, to meet with patients who complain almost entirely of derangements about the throat On the other hand, there may be found in the course of systemic diseases, congestions of the pharynx and larynx marked by alterations of voice, excessive discharge, etc , which seem to be entirely independent of the general affection Such cases are in a measure amenable to local treatment One will be surprised, on taking pains to examine the nasal passages, pharynges or larynges of a large number of people, comparatively well, to find bunches of enlarged follicles, or enlarged tonsils, or tonsils with apparently diseased follicles or groups of enlarged glands at the base of the tongue, or swollen turbinated bodies, or enlarged pharyngeal tonsils, who apparently are not suffering from abnormal sensations It often happens also that we are consulted by people presenting groups of symptoms entirely due to disease or derangement of other organs, whose throats will present some of the appearances just mentioned, but who themselves are unconscious of any disturbance there, unless once in a while under the influence of a so called cold On the other hand, while such observations are of untold value in directing our thoughts towards the general survey of the bodily functions, it is gratifying to note, to the credit of this special field of practice, that there are also many instances where marked disease of other organs or parts has been relieved by an operation on the nose for the removal of hypertrophied tissue, or deformity, or disease of bone, or by the local treatment of a diseased pharynx or larynx It is also quite notable that the treatment by surgical means or otherwise, of an enlarged or diseased palatal or pharyngeal tonsil will sometimes produce the most salutary effects on the general nutrition, or remove a chronic deafness

In the case of children suffering from so-called adenoid vegetations at the vault of the pharynx, too much consideration can not be given the case before instituting operative procedures For it must be remembered that the size and shape of the pharyngeal tonsil varies much with the individual, even within the limits of a healthy condition, and that, if the child does not suffer from stenosis, or deafness, or extra secretion or other disturbance of the functions of the part, it will not be necessary *always* to attempt removal or destruction of the part, although the tonsil may appear relatively enlarged But if any of these untoward phenomena are present in a given case, then the physician should not hesitate to remove by suitable means the redundant tissue

Unfortunately, regarding treatment of tonsils we are often obliged to depend more upon signs and symptoms than appearances, as our knowledge of the function of these glandular aggregations is far from exact, so that we may meet with the paradox of a healthy individual with abnormal tonsils Recent experiments upon the internal secretions and glandular system of the body demonstrate the existence of such biologic relations with the blood and various nutritive processes that we may reasonably hesitate about destroying very much, if any, of these structures

Perhaps I may be accused of taking too conservative a stand, but I know that many present, as well as myself, have seen too often the ill effects of radical treatment by escharotics or surgical measures applied to the nasal passages or throats of young children, as well as adults Hence I feel justified in holding these convictions

There are a great many interesting questions relating to local disease which we shall not have time to discuss It has been claimed that no local disease *per se* (not traumatic) can exist for any length of time without more or less general derangement of the functions This is perhaps too far from the truth However, the rapid strides of physiologic chemistry and physiology teach us that local disease is less of an entity than we have been accustomed to suppose For in all special departments of medical practice there are many observations made, day after day, which show the intimate connection between the different parts of the body through the agency of the nervous system, or the blood or the lymphatic fluid, so that we may well inquire how much truth there is in the above mentioned dogma In other words, whether local abnormalities are mainly expressions of primary disease there, or consecutive and dependent upon disease elsewhere Common sense, of course, dictates that if we meet with neoplasms or positive hypertrophy or deformity which, through mechanical or physical irritation disturbs surrounding tissues, we must promptly remove the same by the best and quickest means at our disposal, but, in cases where such local lesions are not obvious, and where there may be doubt, we should delay the adoption of any positive form of local treatment until we have acquired a tolerably good knowledge of the mental and physical condition of the patient In other words, the patient is to be viewed as an organism, or a combination of physical elements acting together, before we undertake the work of repair

ORIGINAL ARTICLES

A CASE OF CARIOUS DESTRUCTION OF THE ENTIRE PYRAMID OF THE TEMPORAL BONE

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association

BY C BARCK, M D
ST LOUIS

H W, aged 12 years, came under observation on Dec 30, 1891 Both parents living and healthy Of their nine children, three died in infancy, and one brother of 7 years, a year ago after an *operation performed on the left mastoid*

The patient had chronic otorrhea from the left ear for about seven years, the sequelæ of scarlatina Has been under the care of a number of physicians at different times Five years ago, an operation on the mastoid had been performed

Status emaciated boy, temperature 102, right ear normal, fetid discharge from left ear Walls of *external canal* swollen so that no speculum can be introduced Above the *mastoid an old cicatrix, the* whole mastoid region edematous and painful upon pressure Facial paresis of moderate degree A close examination revealed no evidence of tuberculosis

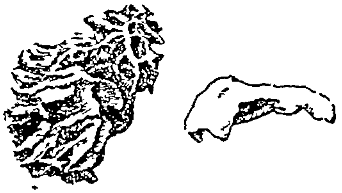

FIG 1

Operation on Dec 31, 1891 Opening of the petro mastoid by the ordinary method The external lamella of the bone was nearly three lines thick *After its removal with the* chisel, a cavity filled with pus and detritus was exposed, scooped out with a sharp spoon The posterior wall of this cavity was soft, being formed by the dura mater, and upon *manipulation on this* portion, an alarming cessation of breathing occurred twice

The healing process at first did not deviate from that of the vast majority of cases The temperature became normal, general health improved, but the opening did not close Exuberant granulations sprang up which necessitated repeated removals, rough bone could be felt, and in brief, within the next five *months* the *entire* petrous portion of the temporal bone was exfoliated in three large and some smaller pieces The first sequestrum was removed on February 20, the second on April 16 and the third on May 20, 1892 The last two pieces a and b embrace the whole labyrinth The drawings are double the natural size

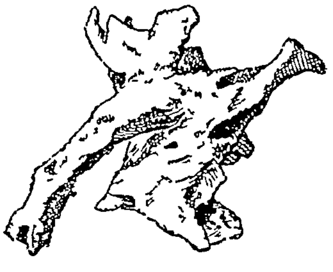

FIG 2

Soon *after the* exfoliation the discharge ceased entirely The permanent opening behind the ear is one-half inch in diameter Joining the external canal at an acute angle, both lead into a large cavity, one and one-half inches deep, lined by a pale reddish-gray membrane This is, with the exception of a few softer places, hard and fibrous upon touch, and in my opinion formed by the periosteum

I do not deem it advisable to close the opening behind the ear by a plastic operation, as the large cavity can be inspected and kept clean better through it than through the external canal

The general condition has wonderfully improved, boy now in robust health The facial paralysis had become *steadily worse during the illness and was nearly complete at the time of the removal of the last sequestrum* Since then it improved slowly, the eye can now be closed up *to 4* mm

The taste on the left half of the tongue is considerably lessened, conclusive evidence of an involvement of the chorda tympani The uvula does not deviate from the middle line, *indicating that the* nervus petrosus superficialis major remained intact

Vertigo or impairment of equilibrium has never been *observed, neither has patient had* subjective noises The question of hearing is most important No tuning-fork can be heard from the affected side by air conduction By bone conduction it is perceived to a moderate degree in the other ear

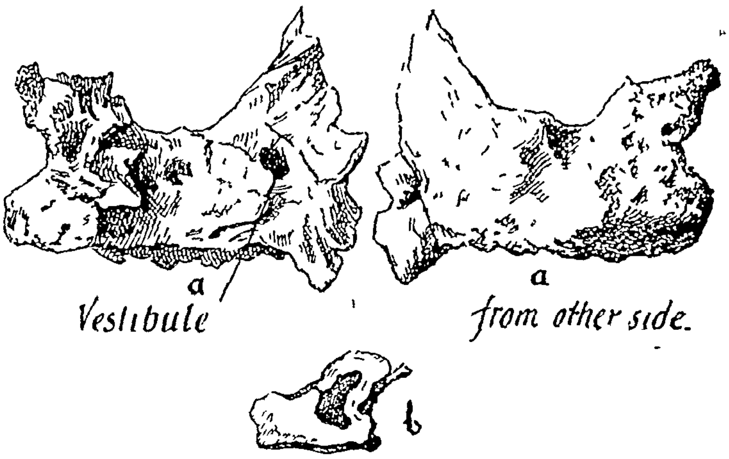

FIG 3

Careful examinations convinced me that the hearing is entirely lost, but impressed me on the other side with the difficulty or rather impossibility of the complete exclusion of the other ear from the act of hearing For instance, after this had been tightly closed by three successive pellets of cotton, then the auricle bent forward and covered by a towel and the hands of an assistant, ordinary conversation was understood and repeated at two feet distance from left ear But under the same conditions it was understood at four feet from the right ear Control tests are indispensable in these cases The question has been fully ventilated by Bezold in his valuable contribution "On Necrosis of the Labyrinth," (Arch of Otology, 1887) In the five cases by Guye, Cassels, Christenneck, Jacobson and Gruber, which were brought forward to establish the fact, that the hearing is not entirely lost after destruction of the labyrinth, he proved the assumption to be fallacious None of them can pass the crucial test absolutely necessary in a question of such fundamental physiologic importance

The judgment of localization of sound was in my case decidedly better on the right than on the left side

In the recent literature since 1880, I find seven similar cases reported

S Pollack, Arch of Ot, 1881, p 361
Walter Pye, London Lancet, Feb 1885
Roosa and Emerson, Leitschrift f Ohrenheilkunde, XV
Gottstein, Arch f Ohr XVI p 51
Bezold, Arch of Ot 1887 p 297, two cases
Koebel, Med Corr Blatt f Wurtemburg, 1889

THE RELIEF OF CHRONIC DEAFNESS, TINNITUS AURIUM AND TYMPANIC VERTIGO, BY REMOVAL OF THE INCUS AND STAPES.

Read in the Section on Laryngology and Otology at the Forty-fourth Annual Meeting of the American Medical Association.

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There are numerous cases of chronic catarrhal otitis media with the characteristic tinnitus, deafness, and tympanic vertigo, which continue to suffer even after the nares, naso-pharynx, and fauces are restored to health. Therefore, after the restoration of the nose, naso-pharynx, Eustachian tube, and throat to a normal condition, the aural symptoms being little or no better, the aurist is confronted with the very important question as to what shall be done to improve the hearing, reduce the tinnitus and abolish the vertiginous tendency. Many surgical methods of treating the ear at this point of its history have been suggested and put into operation, chiefly for the relief of one prominent symptom, namely, deafness. These operations have ranged from simple puncture to total excision of the tympanic membrane, and the removal of one or more of the ossicula. Sometimes, however, patients complain more bitterly of the noises in their ears and of the vertiginous symptoms, the latter often miscalled Ménière's disease, than they do of their deafness, and gladly accept relief of these symptoms even if the deafness remains. Unfortunately for these patients the noises in the ear or ears, and the tympanic vertigo, or mis-called Ménière's disease, which are entirely due to lesions of the middle ear, from chronic catarrh, are very frequently erroneously ascribed to "biliousness," or "neurasthenia," and hence the constitutional and electrical treatment often instituted on this false diagnosis lead to no relief; often, indeed, such treatment aggravates the symptoms. All of these symptoms—tinnitus, deafness, and tympanic vertigo are due to the chronic sclerosis of the mucous membrane of the drum cavity, and consequent retraction of the chain of bonelets, and the undue pressure inward of the stapes upon the labyrinth fluid. The production of the tinnitus and deafness has long been accepted to be due to this mechanical cause. Not so, however, the chronic tympanic vertigo which so often attends chronic catarrh of the middle ear. It has even received an improper name, being often mis-called Menière's disease. The latter term, if it means anything, means a form of aural vertigo due to the disease of the semi-circular canals in the internal ear. Disease of these canals, however, is very rare and difficult to diagnose. The name, Ménière's disease is therefore inaccurate, because it is applied indiscriminately to all forms of ear vertigo, regardless of the seat of the otic lesion, whereas, Menière attempted to prove the existence of a disease of the semicircular canals as the only cause of aural vertigo, an entirely untenable hypothesis. Also the name, Menière's disease, applied to chronic tympanic vertigo is unjust because Flourens in 1822, and Deleau in 1836, described ear-vertigo more accurately than Ménière[1] in 1861, and Deleau came much nearer than any previous observer, to the solution of the cause of most cases of aural vertigo, in placing the origin in *lesions of the middle ear*.

Tympanic vertigo, however, from lesions in the middle ear is of frequent occurrence. It is often not recognized, especially by the general practitioner as ear vertigo. It is not unusual for tympanic vertigo to be attributed to some intestinal or nervous disturbance as already stated instead of to an aural lesion. Hence, the diagnosis being erroneous at the outset, the treatment is wrong and the patients do not recover.

True tympanic vertigo, due to a lesion in the middle ear, chiefly from chronic catarrh of the tympanic cavity, is paroxysmal in character and always attended with tinnitus and deafness in the affected ear. It is caused by the inward pressure exerted upon the labyrinth fluid by the retracted and ankylosed ossicles. The foot-plate of the stapes is thus unduly pressed into the oval window, and there held by the force named, paroxysmally and for longer or shorter periods.

Chronic tympanic vertigo may attack the patient in any place or at any time without warning, unless it be a slight increase in tinnitus, but this is not invariable. It may vary from a slight unsteadiness in gait to reeling and falling, without loss of consciousness. Sometimes the nausea is intense and vomiting may occur. If the nausea and vomiting are excessive, syncope from this cause may ensue but this is the only form of unconsciousness ever produced by tympanic vertigo.

Such a tympanic and mechanical origin of most cases of ear vertigo, I have long maintained, in opposition to the often asserted neuropathic or labyrinthine cause.[2]

Sooner or later in every case of chronic catarrh of the middle ear there must be a disturbed tension in the conductors of sound, due to the sclerosis of the investing mucous membrane, whereby at times the membrana tympani and the three auditory ossicles are carried unduly inward, exerting a morbid pressure through the stapes upon the fluid in the internal ear. Such irritation in the labyrinth being communicated to the motor filaments of the auditory nerve is reflected by them to the cerebellum, and disturbed equilibration is the result.

This morbid retraction of the auditory chain and resultant cerebellar irritation are not constant, but vary with the state of the general health, and the condition of the catarrhal middle ear, just as tinnitus and deafness vary under the same influences. Hence, all true aural vertigo of tympano mechanical origin is paroxysmal in form.

If the theory is correct that the vertigo in chronic catarrh of the middle ear is due to the paroxysmal retraction of the conductors of sound and the consequent mechanical pressure on the labyrinth fluid, then the removal of the means of such temporary increase of retraction and pressure ought to relieve tympanic vertigo. No method however, but the surgical removal of the agents in this retraction will effect a cure of chronic tympanic vertigo.

The first chance of testing the truth of this theory offered itself to me in May, 1888. At that time I was consulted by a former patient with chronic catarrh of the middle ear, for the relief of constant tinnitus, and for recurring attacks of *severe tympanic vertigo*, which had been superadded to her deafness in the left ear within the previous two years, during which time *I had not seen her* Finding at that time that the malleus had become adherent to the promontory, I resolved to do, what so far as I know had never been done, for the relief of any form of ear vertigo, namely, to cut away the membrana tympani and the malleus in order to liberate the impacted stapes, which I felt sure to be the true cause of the vertigo in this case This case and the entire success attending the operation have been fully detailed in other places I would like to state here that the entire relief from tinnitus and vertigo which followed immediately upon the operation five years ago has continued to the present time

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[1] Gazette Médicale de Paris, Sept. 21, 1861.

[2] "Aural Vertigo." Philadelphia Medical Times, June 3, 1882.)

I then operated during the following three years upon four more cases of chronic tympanic vertigo, consequent upon chronic catarrh of the middle ear, with entire relief in all of them[3]

However, as in all of the cases more or less inflammatory reaction followed this operation of total excision of the membrana, I concluded that removal of the incus alone, or of the incus and the stapes, the membrana tympani and the malleus being allowed to remain in position, would liberate the stapes and the compressed labyrinth fluid as well as, or perhaps better than total excision of the membrana and the malleus, and probably would not be followed by inflammatory reaction, and the notes of the following cases will show that I was correct in my assumption All the operations referred to in this paper were performed upon the etherized patient, the ear being illuminated by a six-volt electric lamp held on the operator's forehead Of course, in all of these operations there has been the three fold object to attain, namely, the relief of chronic tinnitus, deafness, and tympanic vertigo, the three results of chronic catarrhal otitis media

Having alluded to five cases of total excision of the membrana for the removal of the incus and stapes without their notes, I will give some details of operations

Case 1—Miss T of Virginia, 30 years of age, was first examined by me in June, 1892 The patient had been operated upon for nasal polypi six years before Soon thereafter she had had typhoid fever and finally nervous prostration with uterine disease, for which latter she has just been successfully treated by a prominent gynecologist All of these maladies just named cover a period of the last six years The hearing began to fail about two years previous to the time of her first consulting me At that time there was found some slight hypertrophic nasal catarrh, for which the patient was ordered to use a spray of Dobell's Solution, two or three times a week

In November, 1892, when I saw the patient again I made the following notes the right membrana tympani is retracted, opaque and of a bluish-pearl color The incus-stapes articulation is not visible through the membrana There is a constant tinnitus, the hearing for all sounds by aerial conduction equals zero, and the tuning fork is heard *per ossa* in the right ear The external auditory canal is very narrow On November 21 the patient was etherized and the upper posterior quadrant of the membrana tympani was cut away and the incus revealed The incus was then detached from the stapes and removed from the tympanic cavity The stapes was high placed and not seen Had I made the incision a little higher the stapes might have been seen and an endeavor made to remove it

On November 22, no reaction had taken place and the patient volunteered the statement that the tinnitus was decidedly less and that she could hear a little On November 23 she heard a *little better* There was no reaction in the ear and the tinnitus was further decreased On November 25 there was a little more tinnitus than on the 24th but not so much as before the operation On November 26 the patient could hear loud vocal sounds through an ear trumpet, which were inaudible before There was now no tinnitus On November 29 same report was made as on the 26th The patient now returned to her home After her return home she exercised this ear according to my directions, by having some one read to her through the ear trumpet once or twice daily for fifteen minutes at a time This was done in order to insure passive motion of the stapes by a concentration of sound waves upon it

In December, 1892, she reported that she could hear better with the ear trumpet, before she could not hear without it In January, 1893, her father wrote me that his daughter could now hear reading in the right ear, unaided by the ear trumpet, and with the voice slightly elevated There has never been any inflammatory reaction in this case I am unable to say whether the perforation in the membrana has been maintained, as I have not seen the patient since her return to Virginia A letter in April, 1893, informs me that still further improvement in hearing has taken place Such progressive improvement in hearing as one of the good results of tympanic surgery, was first noted by Sexton of New York

Case 2—Mr J H P, 23 years old, states that he has had chronic hypertrophic aural catarrh in both ears for several years The left ear was formerly better than the right, the latter has improved under treatment of the nasopharynx, but the left ear has not improved The hearing distance in the left ear for the voice when I first examined him was one foot, and there was an annoying tinnitus The membrana tympani was opaque The incus-stapes articulation was not visible through the membrana

On Dec 15, 1892, the patient was etherized and the posterior superior quadrant of the membrana was excised The incus, stapes stapedius pyramid, and the tendon inserted in the stapes were then plainly visible The tendon of the stapedius was first severed, then the incus was separated from the stapes and removed from the tympanic cavity A blunt stapes hook was then passed beneath the head of the stapes between the crura and traction made This bonelet was found to be most firmly imbedded in the oval window Traction upon the stapes by means of the stapes hook brought away its head and crura The operation was bloodless

On December 16 no reaction had taken place and there was much less tinnitus The hearing distance was not noted, as I did not see the patient that day On December 17 no reaction had occurred and there was further marked diminution of the tinnitus The hearing distance for the voice in low tones was from four to six feet On March 28, 1893, considerably over three months after the operation the perforation in the membrana still existed A little tinnitus was perceived in this ear if the patient took cold in his head, otherwise he did not observe any noise in his ear He volunteered the statement that *the operation was worth the relief from the tinnitus, regardless of the improved hearing* The hearing distance at the present time is from eight to ten feet for isolated words, there having been a *progressive improvement* in hearing since the time of the operation

Case 3—B B, a girl 12 years old, has been known to have dullness of hearing in the left ear for two years When brought to me in October, 1892, the right ear was entirely normal, the hearing in the left ear was zero, tinnitus and vertigo at times were very annoying The tuning fork was heard *per ossa*

On Dec 16, 1892, the patient was etherized and excision of the upper posterior quadrant of the left membrana was performed No bleeding followed The incus stapes, and stapedius pyramid, with the tendon were then distinctly seen The stapedius tendon was severed first, then the incus was detached from the stapes and the stapes was removed whole from the oval window There was no escape of labyrinth fluid Finally the incus which seemed unusually adherent in the attic was removed The operation was bloodless On the next day there was no reaction, no vertigo and the patient felt well and lively She heard isolated words in the left ear at a distance of from eight to ten inches and there was no tinnitus On December 22 there was no reaction and no regeneration of the membrana The voice was heard in whisper at a distance of from six to eight inches, and louder tones two to three feet There was no regeneration a month later On April 1, 1893, regeneration of the membrana was found to have taken place The hearing was not improved but there had been *entire relief from tinnitus and vertigo,* which symptoms had been ascribed to other causes before the ear was examined by me and operated upon

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[3] International Clinics January, 1892

This is the only case in the present series in which the stapes was removed entirely The result was so good, in fact, so much better than in some instances in which the stapes was only liberated by removal of the incus, or only its crura were removed in addition to the removal of the incus, that I am inclined to think that in any case of tympanic vertigo, in which liberation or partial removal of the stapes does not give as much relief as is desired, puncture of the foot plate of the stapes in order to relieve the labyrinthine tension would be justifiable

Case 4—Mrs T R G, aged 55 years, the wife of a physician of Clearfield County, Pa, has had chronic catarrhal otitis media since childhood The tinnitus has increased of late years, and she has been treated for several years by various physicians for neurasthenia without relief Within a year or two, marked tympanic vertigo has set in and increased to *weekly attacks*, laying her up in bed whenever a paroxysm occurred These attacks usually have come on in the house, sometimes in bed, but once lately the patient was attacked while out driving These attacks of vertigo have been attended with increased tinnitus, nausea, and vomiting without loss of consciousness the face and forehead being bathed with cold sweat There has never been any aural treatment carried out in this case The patient has been treated with purgatives and alteratives for debility and "neurasthenia," and has grown steadily worse

Examination of the left ear in June, 1893, revealed a retracted membrana tympani with signs of sclerosis of the drum cavity The incus and stapes were visible through the membrana There was no catarrh of the nares, or naso-pharynx The tuning fork was heard *per ossa* in the affected ear Loud sounds could be heard near the ear The right ear was good, but was said to be failing a little of late

As the attacks of tympanic vertigo had now become so marked and distressing, her husband determined to seek relief for the patient by means of the removal of the force impacting the stapes in the oval window Therefore, on June 7, 1893, the patient was etherized, and after excision of the posterior superior quadrant of the membrana, the incus, though held tightly in place by synechiæ was quickly removed The stapes was found firmly and immovably fixed in the oval window and could not be removed, its head being broken off in the endeavor There was no reaction in this case and the patient went home in a few days

Three weeks after the operation her husband wrote that, "she has been getting on so well that we have somehow failed to report to you of her general improvement The first week after the operation she had several very slight attacks of vertigo, but they passed off very soon and of late she has had no trouble whatever" She has been able to go about the house attending to her duties without the fear even, of the hindrance previously experienced from the attacks of the tympanic vertigo The tinnitus became much less and the hearing improved a little, but the great end had been attained, namely, the relief from the sickening and incapacitating chronic tympanic vertigo On August 8 her husband wrote that there had been some attacks of slight vertigo since his last letter but nothing severe Before the operation the patient had been bedridden by the severity and duration of the vertigo A letter of September 10 states that the patient is free from vertigo

Case 5—Sister M, a nun, 25 years old, states that she has suffered for several years from tinnitus, deafness, and tympanic vertigo, due to sclerotic otitis media of the right ear, following a chronic purulent otitis media which latter ceased years ago In May, 1893, inspection revealed a perforation of the posterior superior quadrant of the membrana, with calcareous patches in the upper posterior and upper anterior quadrants of the membrana The tuning fork is heard well *per ossa*, and isolated words were heard close to the affected ear On June 28, 1893, patient was etherized and the perforation already existing enlarged and extended into the upper posterior quadrant, exposing the incus lying high up in the attic The incus was then removed

The next day the hearing for isolated words in an ordinary tone was two feet, and for whispered words from eight to ten inches The patient was not seen again until July 20, 1893, when she reported that there was no more tinnitus, nor "swimming in the head" There had been no return of these symptoms by Sept 1, 1893 The result in this ear has been so good that a similar operation is contemplated for the relief of dullness of hearing and tinnitus in the better ear

Case 6—Mr C C T, aged 31, of Baltimore, stated July 18, 1893, that he had been affected with chronic catarrhal otitis media in the right ear for eight years, and in the left ear for four years Within a year the tinnitus has become severe in both ears and the hearing has failed in both, the left ear being a little better for hearing, however, than the right ear In addition to these symptoms there had been superadded the tendency to attacks of tympanic vertigo with temporary increase of tinnitus in both ears at the time of the vertiginous paroxysms So severe have the latter been as to require the patient to hold on to the nearest object in the street to prevent him from falling He has never vomited, however, in any of these attacks, but their severity and frequency have dispirited him and prevented him from attending to his duties as a book-keeper For many months previous he had been treated for an asserted catarrh of the nares, naso pharynx and throat, but the tinnitus, deafness and vertigo have grown worse rather than better Examination revealed the membranæ tympanorum to be slightly retracted, the incudes visible through the membranes, the nares and naso pharynx were not affected

July 21, 1893, the patient was etherized, and I endeavored to remove first the right and then the left incus by exsection of the posterior superior quadrants of the membrane The right incus seemed to be firmly held in the attic and when traction was made on its long process it quickly broke off No further attempt to remove the body of the incus was made, as the object sought, namely the severance of the retractive power of the incus from the stapes had been attained I met with the same experience on the left side The next day there was a slight reaction in both ears The tinnitus was no better, and the hearing was perhaps a little duller in the left and better ear, but there was no vertigo

The patient now returned to his home and reported to me in the course of four days that he had had no vertigo, but that he felt worse in his ears and that he had some fugitive pains in them with a little bleeding from one

August 11, the patient reported a "slight improvement in hearing in the left ear, but none in the right" The tinnitus still continued, but there had been an entire absence of vertigo" The left ear had pained him 'quite a good deal and felt uncomfortable for the past day or two"

August 13, the patient's sister, a physician, reported to me that her brother had evidently improved in his hearing during the last ten days, and there had also been a great improvement in his spirits

On Sept 3, 1893, the patient wrote that the hearing in his left ear was much improved He said "I can hear conversation in ordinary tones about two feet, and if loud about ten feet If the windows are open I can hear calls on the street There is scarcely any singing in the left ear, and hearing in the right ear seems to be about the same as before the operation" There had been no return of the attacks of tympanic vertigo The ear felt entirely comfortable

It is noteworthy that in this case relief followed the severance of the retractive force by resection of only the long processes of the incudes, also *that most improvement in hearing and relief from the annoying tinnitus ensued in the better ear* This is due to the fact that greater mobility of the stapes had persisted in this ear than in the worse ear, and hence liberation of the freer stapes and the passive motion exercised upon it by sound waves have improved the function of hearing in this ear more than in the worse ear The result in this respect should encourage the surgeon to operate upon both ears, or upon the better ear rather than upon the worse ear alone, when both are so profoundly affected as in this case. Most important is it to observe the *progressive improvement* in this case, as in some of the others. This must be due to the effect of the continuous passive motion exerted upon the ankylosed stapes by sound waves which fall upon this bone more freely than before the operation It may, therefore, be concluded

1 That removal of the retractive force of the

sound conductors upon the stapes is the efficient means of relieving the tinnitus, deafness, and vertigo due to the lesions of chronic catarrh of the middle ear

2 That the removal of the retractive force upon the stapes can be accomplished efficiently and simply by removal of the incus alone, and even by resection of its long process

3 That the improvement in these cases is due to the liberation of the stapes from the retractive power of the tensor tympani muscle, and the consequent unimpeded action of the stapedius muscle, which relieved of the antagonism of the tensor tympani tends all the more to draw the stapes from the oval window, thus aiding in the isolation and improved mobility of the bonelet, as well as in removing its undue pressure inward upon the labyrinth fluid

4, It seems wiser, therefore, in most cases of chronic catarrhal deafness, tinnitus and tympanic vertigo, not to sever the stapedius tendon and remove the stapes, but to be content with the removal of the incus only

5 Removal of the incus alone, the membrane, malleus and stapes being left in situ, gives more space to the drum cavity, *increases its resonance*, and permits freer access of sound-waves to the stapes, thereby improving the hearing

6 The progressive improvement in the hearing noted in many instances, especially in Case 1, must be due to the continuous passive motion exerted upon the ankylosed stapes by sound waves which are enabled to reach this bonelet more freely after the removal of the incus

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SOME NEW METHODS OF TREATING CHRONIC SUPPURATIVE OTITIS MEDIA

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY F C HEATH, A M M D

INDIANAPOLIS IND

No apology is needed for proposing any new methods of treating a disease so intractable, in many cases, as chronic suppuration of the middle ear That the methods about to be mentioned, in connection with a few cases cited, give miraculous results, are superior to all others or are applicable to every case, I am far from claiming, but they have certainly proved efficacious in some instances A few cases will serve to illustrate these methods (perhaps more properly called modifications of one general method)

Case 1—Miss P , Indianapolis , nurse, aged 34, came to me Oct 25, 1892, with history of pain in right ear for about a week Had been treated for nasal catarrh for nearly a year by a competent specialist No physical signs of phthisis discovered, but stated that she had had several hemorrhages Bone conduction was better than air conduction Watch heard but two inches from right ear Considerable pus found in canal Inspection after cleansing showed moderate perforation of membrana tympani in the anterior inferior quadrant Used 5 grain solution of nitrate of silver in office (Buck's method) and advised warm water syringing and boric acid at home , later, weak solution of alum and zinc sulphate Discharge ceased after one month's treatment but soon reappeared and proved very obstinate After faithful trial of solution of silver and later of bichlorid of mercury with little (if any) improvement, papoid was resorted to January 9, its use being suggested by the favorable reports of the use of digestive ferments, in the treatment of ulcers, given in our journals Two days after there was no discharge and treatment was discontinued The discharge reappearing two weeks later and not yielding promptly to papoid (although somewhat modified by it), dermatol was employed after Buck's successful method with iodoform, that most recent substitute for the latter having been used by surgeons with so much success and satisfaction with no drawback from an olfactory sense A few applications stopped the discharge entirely and it has never returned, over four months having elapsed since treatment ceased Tinnitus aurium still gives occasional trouble, much less than formerly Watch now heard distinctly three feet

Case 2—Mrs F , Rockville, Ind , troubled with deafness of left ear and discharge (at intervals) for many years Watch heard only on contact Drum membrane almost entirely destroyed Granulations in middle ear and masses of hardened discharge Patient troubled also with numbness of limbs and bad general condition , neurasthenic Fellows' Hypophosphites and iodid of iron pills were prescribed for constitutional treatment A little of the discharge was removed by syringing and papoid blown in , same treatment daily for several days Discharge soon became liquid and very profuse There was tenderness of canal and severe pain for a short time This was controlled by hot water syringing, pain and discharge both ceasing quite promptly, numbness disappearing and general condition improving Effect upon granulations unknown, patient not having been seen since the above treatment

Case 3—Miss C , Indianapolis , referred to me Jan 2, 1893, by a general practitioner, who had partially removed a polypus from left ear Hearing was very bad , pressure only Considerable discharge for a year previous Inspection showed polypus coming from middle ear through perforation near center of membrana tympani This was removed, partly by snare and partly by caustics After using silver, bichlorid of mercury and other solutions for some time without much effect, papoid was applied by means of moistened applicators, followed by insufflation of boric acid A few weeks of this treatment possibly checked the discharge a little and modified its character Dermatol was then resorted to with good effect, the discharge immediately lessened and after a few applications ceased entirely about the last of February The hearing was but slightly improved

This patient returned lately with a discharge from the other ear (right), neglected for over a month This is gradually yielding to similar treatment, peroxid of hydrogen having been used, in addition, for cleaning the ear at the office The left ear started to discharge again since she placed herself under treatment for the right, but the discharge has been easily controlled by the peroxid of hydrogen, pepsin and dermatol

Case 4—Miss D , Indianapolis , aged 20, discharge from both ears, for eight years, following scarlet fever Hears watch six inches with right ear and four inches with left Polypus in latter gradually removed with caustics Right membrana tympani nearly destroyed Boric acid, silver solutions, etc , seemed to have but slight effect upon right ear Pepsin somewhat modified the character of the discharge and it is now gradually lessening under the use of peroxid of hydrogen for cleansing, followed by dermatol This is a very obstinate case, having been under treatment (somewhat irregularly) for four months , although there is still some discharge, it is much less in quantity and less offensive in character since beginning the present line of treatment The hearing has also improved very considerably

Case 5—Miss O , Indianapolis , considerable ringing and buzzing, with slight pain, in right ear Hears watch four inches with this ear, fifteen feet with left Bone conduction better in right, air conduction in left Examination shows masses of hardened secretion in right canal This has been gradually softened by using peroxid of hydrogen, followed by pepsin The discharge is now liquid and is being checked by degrees with the use of peroxid of hydrogen and dermatol The hearing is improving and the ear is much more comfortable

The use of papoid, or pepsin, in the ear (so far as I know) has never before been reported When I began to use dermatol, I had seen no mention of its use, either, in aural affections, but have since seen three reports Dr Doenberger was unable to come to any conclusion respecting its action , Dr Davidsohn of Berlin, tried it in fifty cases, some of which improved very rapidly and a few improved after unsuccessful treatment with boracic acid, yet he thought the results on the whole no more satisfactory than those obtained from using boracic acid , on the other hand, Dr Stone of Boston, reports Dr Jack of the Massachusetts Eye and Ear Infirmary, as believing that "healing was materially hastened in cases treated with the dermatol, where formerly he would have used the boracic acid" My limited experience, so far as it goes, inclines me to indorse the opinion of Dr Jack, and I also believe that papoid and pepsin may frequently be employed with advantage I am aware, however, that the few cases above reported are far from being conclusive, and the only value to be hoped for in connection with this report is, that it may prove suggestive, leading to more complete reports from competent observers

SOME REMARKS ON THE OPERATIVE METHODS IN THE TREATMENT OF ADENOID GROWTHS

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association

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It is not my intention in this paper to give a resume of the operative methods in the treatment of adenoid growths, nor a historical outline of its gradual development and improvement, but simply to describe the operative method I have now employed for several years in the treatment of this condition In the various steps of the operation I claim nothing original, my originality, if any exists, arises from the manner in which the successive steps are made to interlace It is with growing interest that I have watched, year by year, the rapid increase in the number and variety of forceps and curettes for the operative removal of these growths, until my interest has become satiated with their multiplicity Many of these inventors seem to have overlooked the fact that nature has endowed them, not only with the safest and most complete, but also the most sensitive instrument for this work My method of operative procedure is as follows

The child is prepared for the operation in a general and local manner, as all good surgeons prepare their patients when about to resort to operative methods I prefer always to give a general anesthetic, as I consider the operation not only extremely painful, but excessively alarming to the little one I prefer ether, because I consider it safer, although I do not object to chloroform, should others insist upon its use I do not consider the A C E mixture reliable It is stated by many that ether produces an excessive flow of salivary and mucus secretion into the mouth, and that it also increases the amount of hemorrhage, by producing turgescence of the head The former condition I have never seen to an annoying degree—very rarely any increase over that which would be produced by the use of chloroform I have never had what I could call more than a normal amount of hemorrhage after any of my cases, and therefore can not give any evidence as to the latter assertion My patient, prepared for the operation, is etherized in the recumbent position The etherization is carried to the point of complete abolishment of all reflexes After the stage of excitement has passed, the ends of the sheet, upon which the child has been lying, are brought over and the arms and legs firmly pinned therein When the corneal reflex has completely disappeared the etherization is entirely suspended The child is now placed in the erect position, in the arms of an assistant who has been seated waiting to receive the patient The assistant encircles the child with his left arm, supports its head with his right hand, and hugs the lower extremities of the patient between his clasped thighs—in this manner the child is firmly held The gag is now placed in the child's mouth and held by the assistant Holding the head with the right hand the index finger of the left hand is rapidly passed up behind the soft palate and the growth quickly torn away from all points of attachment The nail of the finger must be a little prominent, as it is often necessary to tear and cut as well as crush the growth The blood now commences to flow quite freely from the nasal and buccal cavities, and it is well at this stage of the operation to incline the child slightly forward, so that the blood and broken-down tissue can more readily flow from the nose and mouth, until the operation is completed The operation is completed in a minute or so, and the child is held forward in the inclined position until hemorrhage has about ceased I always have a large mouth cuspidor in front of assistant, so that the blood flowing from the patient's mouth and nose can be caught therein The patient, now partly conscious, is cleaned of all blood about the face and put to bed Many object to the erect position in operating upon these growths, for fear that blood will flow into larynx and interfere with respiration I will state that no one has cause to dread such an occurrence In the four hundred and more cases that I have operated upon in this position, I have never yet had the slightest indication that a drop of blood ever entered the larynx There is much more danger of the blood entering larynx and causing an arrest of respiration when the patient is placed in either the supine or prone position I have operated on several patients where other operators have been obliged to suspend interference before finishing, on account of dangerous and alarming dyspnea, and in conversing with others, I find that such a state of affairs is of no rare occurrence The use of the finger for the various forms of forceps and curettes was a gradual innovation with me The first hundred cases I treated entirely with forceps and curettes, requiring prolonged instrumentation and frequent introduction of finger, to learn whether all of the growth was thoroughly removed Often I would, after removing several masses with forceps or curettes, finish the operation with my finger, and later on, I gradually found that although always getting ready my forceps and curettes I rarely took them in hand, finding that after the introduction of my finger the growths were so easily crushed and scraped away that I finished the operation with the finger Now I never use the curette, only using the forceps when, after scraping away the greater mass of tissue, there seems to be one or more fibrous bands resisting and slipping away from the finger These I tear away with forceps

In most children, between the ages of two and ten years, these growths are so soft and gelatinous-like in their texture that they readily yield to the pressure of the finger and the cutting of the finger nail

The advantages that the use of the finger offers over many forms of instruments are manifold

1 The rapidity with which the operation can be done, requiring only the use of a small amount of ether

2 The exactness with which the operator can work,

as his tactile sense gives him complete knowledge of what he is doing and where he is working

3 The complete absence from all possibility of injuring normal parts or tearing away normal tissue

4 The comparative freedom from hemorrhage, as only adenoid tissue is removed and the normal mucous remains uninjured

1102 L Street

CASES OF LARYNGEAL NEOPLASMS

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY ROBERT LEVY, M D

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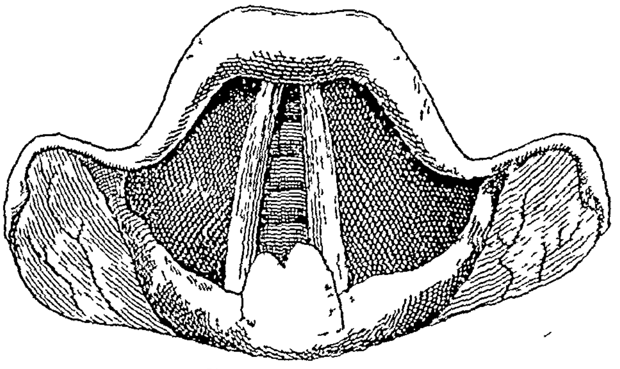
The following cases are reported, not with the view of adding anything new to the already extensive laryngeal literature, but for the purpose of placing on record two interesting cases

Case 1—A K, female, age 21 months, was brought to my office Aug 22, 1892, having been referred to me by Dr Blickensderfer of Denver The child presented all the evidences of laryngeal dyspnea with marked stridor and especial embarrassment in inspiration The voice was aphonic and there was a slight cough The general condition of the child was bad, her appetite was poor, she was anemic, weak, with a rapid, small pulse The following history was obtained at birth the little one required resuscitating, which was accomplished in about one hour with great difficulty After this, the voice and respiration were good until at the age of about 8 months when, with the beginning of dentition there developed some difficulty in breathing, lasting until the first tooth appeared At the same time the voice was lost but was soon restored, although imperfectly At the age of 13 months there was a return of the dyspnea, at which time the attack was worse than before and lasted about one week The voice was now left less clear, and from that time gradually became aphonic At the age of 16 months another and very severe attack occurred, which was termed by attending physicians "croup," this being the first diagnosis ever made in the case The child never fully recovered from this attack, but was left completely aphonic, with more or less difficulty in breathing at all times, the dyspnea being frequently exacerbated and often associated with fainting spells The case had been seen by many physicians in Iowa, and the diagnosis of asthma often made A change of residence to Colorado was ordered

The evidences of laryngeal obstruction being clear, a laryngoscopical examination was attempted but, notwithstanding the greatest perseverance, could not be accomplished A digital examination was also unsuccessful in determining the nature of the case Tonic and anti spasmodic treatment was instituted, with a view to gain more time and attempt subsequent examinations Three days later, at midnight, a hasty summons took me to the little one whom I found cyanotic and rapidly suffocating The case had appeared to be one of either laryngeal paralysis or papilloma I had previously decided to intubate in either case This was easily accomplished with the smallest tube and the relief immediate and grateful August 29 four days later, the tube was coughed out, its re-insertion, however, being demanded the following day At intervals of three days the tube was expelled and re-inserted September 11, the next size tube was placed in the larynx and remained in situ until November 28 a period of sixty-eight days, during which time the child gained in weight, ate well without the slightest difficulty and improved remarkably The tube was now removed but its removal was followed by immediate and alarming apnea Artificial respiration and stimulation resuscitated the child in about twenty minutes, and the breathing became quite easy The following day however, surgical interference was urgently called for and the same tube placed in the larynx March 20, 1893, the child was found suffering great dyspnea, the attack having come on gradually with several remissions during the previous three days The intubation tube was found in situ and evidently unobstructed from the fact of free expiration It had been in place 111 days without removal Tracheotomy was earnestly advised, but not acceded to by the mother until the child was unconscious, when it was rapidly performed, not without a good deal of hemorrhage, however The tracheal opening was held open by a silk thread until a canula could be obtained, the operation having been demanded without loss of time Following the tracheotomy the respirations became more tranquil but the dyspnea was not entirely relieved On inserting the tracheal tube the breathing became more embarrassed and remained so despite the prompt removal of the canula A digital examination revealed the fact that the intubation tube which had been allowed to remain in the larynx had disappeared, probably into the trachea A pair of McKenzie's laryngeal forceps passed into the trachea came into contact with the lost tube and its withdrawal was at once followed by complete relief During the operation and examination for the cause of the dyspnea, the presence of soft irregular growths was determined by the finger These appeared to occupy a considerable portion of the larynx, both above and below the vocal bands No attempt was made at their removal, owing to the low condition of the patient from loss of blood and the continuous dyspnea With the exception of great weakness and several severe convulsions during one of which the respiratory muscles seemed fixed, the patient made a good recovery and is now gaining rapidly in point of general health.

The patient is now but little over two years old The question of performing laryngotomy and removing the neoplasms, or waiting for an opportunity to perform an intra-laryngeal operation, or for the not impossible spontaneous expulsion of the growths, is an important and interesting one The dangerous consequences of thyrotomy, both as to the life and subsequent voice of the patient, have been well considered Intra-laryngeal removal can successfully be accomplished at a very early age, Rice[1] having performed it at five years and Hovell[2] at three and one-half years, this being probably the youngest on record, while the case of Boylan's[3] at ten years is an example of what can be done by a few years of waiting



Extreme Abduction

That spontaneous cure of papillomata is quite possible, is illustrated by the case of Major,[4] in which a quantity of the growths was expectorated, and the cases of Hunter McKenzie,[5] Eliasberg,[6] Oertel,[7] Lowman,[8] White[9] and Garel [10] Massei[11] shows that many papillomata may disappear because of their being more properly granulomata Browne,[12] by enjoining absolute silence and applying cold prevented recurrence, while Eliasberg believes the removal of the respiratory process from the larynx withdraws certain irritant factors

It is interesting to note the results of treatment for papillomata by intubation, and incidentally the use of this method in other conditions besides croup and diphtheria, as well as the length of time a tube may remain in the larynx without doing any harm Seifferts[13] reports a case in which intubation was done after thyrotomy for papillomata Massei[14] used it in one case, Lichtwitz[15] recommends a fenestrated tube to assist in intra-laryngeal treatment of these growths and other conditions Petersen[16] shows failure in one case treated by intubation Waxham[1] reported an interesting case before this Section at its last meeting, at which time Thrasher[1] also showed the value of intubation in papillomata The case reported by C H Knight,[18] and that of Raynor,[19] are also noteworthy in this connection

Among the various chronic conditions for which intubation has been mentioned, we find ankylosis of laryngeal articulations from cancer,[20] abductor paralysis,[21] syphilis,[22] sub-glottic neoplasms,[23] to assist in removing foreign bodies,[24] tuberculosis,[25] after tracheotomy,[6] stenosis following diphtheria[27] and stenosis following fracture of the larynx[28]

The length of time an intubation tube may, without doing serious if any harm, remain in the larynx does not seem to have, as yet, been settled In fact continual surprises in this respect confront us In one of O'Dwyer's[29] cases the patient did not suffer from retention of the tube for a period of ten months and four days The case of Waxham's[17] already quoted, retained the tube four years, Schmiegelow's,[6] one year, Dillon Brown's,[26] nine months, C H Knight's, three months, Brother's,[30] fifty-eight days, McCurdy's,[31] forty days In most of these cases the tube was removed every month or two, Dr O'Dwyer's, however, remaining continuously ten months and four days In the case here reported, the tube was retained continuously for sixty-eight days, then removed for twelve hours and again retained for 111 days, a total of six months and twenty three days Feeding was normally performed after a few days retention, and there was absolutely no discomfort notwithstanding several attacks of colds and coughs

The noteworthy points here are 1, the occurrence of a growth, probably not congenital, in a child 8 months old, 2, the apparently negative result from treatment by intubation, 3, the length of time the tube was continuously retained without any discomfort

Case 2—G L, male, age 16 years, was referred to the Department of Laryngology at Gross Medical College, Feb 26, 1891, by Drs Bull and Butler of Grand Junction, Col The following history was obtained

His occupation was that of a farmer His health up to the present illness had always been perfect His family history revealed nothing of importance Early in the winter he had had an attack of typhoid fever which had lasted about nine weeks During the last three weeks of his illness his voice was hoarse and there was slight difficulty in breathing, but no pain except upon coughing Soon after his convalescence there developed some dysphagia upon taking liquids a slight cough, followed by occasional sharp and sudden pains, loss of weight and rapidly progressing weakness

A week previous to his arrival in Denver he had an attack of la grippe, since which all symptoms have been greatly exaggerated, more particularly the difficulty in respiration, which upon the slightest exertion causes the patient great suffering

Upon examination the boy presents an anemic, almost cachectic look, marked dyspnea with decided stridor which is constant His voice is dysphonic and his cough gives forth a loud barking sound, pulse 140, temperature 97½ degrees F at 3 P M The laryngoscope shows both vocal bands red and near the median line The left is visible in its entire length, the right is covered at its posterior attachment by a small, light red, lobulated, smooth growth the lobulation dividing its surface into two unequal parts Upon phonation the growth is partly in the chink of the glottis, and upon forcible inspiration the vocal bands are but slightly abducted They are not completely fixed but can be separated about one-fourth inch, during which time the tumor fills up the posterior portion of the chink The left vocal band seems slightly less movable than the right, notwithstanding the position of the tumor The diagnosis of partial bilateral posticus paralysis with some form of laryngeal tumor, probably fibroid, was easily made Without preliminary training, but under cocain anesthesia, an attempt was at once made, with a McKenzie antero posterior forceps to remove the tumor, which under the existing paralytic condition seemed responsible for much of the dyspnea, despite its small size, it being about as large as a green pea The first effort was unsuccessful and brought on at once a severe spasm of dyspnea Before making another trial, preparations were made for a possible tracheotomy This, fortunately, was unnecessary, as about three-fourths of the growth was removed without any difficulty, the result being immediate relief to the breathing The stridor still persisted but was less marked The following day the remaining portion was readily and thoroughly removed and the patient was at once placed upon a tonic of iron, quinin and strychnin with the faradic current applied to his larynx, both internally and externally After two weeks' treatment the patient returned to his home greatly improved, but still showing considerable dyspnea on exertion The cough and pain had disappeared, the voice was clear only at times, being less so in the morning A letter dated May 12, 1891, informs me that he is not yet able to work on account of short breath Another letter, Nov 17, 1891, tells me that he has had electricity applied to the larynx externally until July and has faithfully taken his tonic His breathing is better, he can do light work, his voice is nearly normal A letter received April 15, 1893, shows the patient to be in perfect health, voice and respiration unimpaired

The larger portion of the tumor was frozen, sections made stained and examined by Dr A S Lobingier, then Professor of Histology and Pathology in Gross Medical College, and pronounced by him a spindle celled sarcoma

The cause of abductor paralysis is always an interesting though uncertain subject In this case it can be considered that, the larynx being involved in the typhoid fever, there was set up a peripheral neuritis, as mentioned by Tissier[3] and others Whether we accept the proclivity theory of Simon or not, the fact remains that abductor paralysis follows central lesions, as well as lesions in the course of the inferior laryngeal nerve Local disturbances also play an important part in the etiology, for cases due to myopathic cause, to rheumatism, to localized pressure, are not rare Among the most interesting causes might be mentioned hysteria, as reported in the case of West's[33] and Bandler's,[34] and reflex disturbances from nasal and post nasal troubles, as in Stewart's[35] and Robertson's[36] cases

In regard to sarcomata, these are not of frequent occurrence in the larynx Bosworth[3] collects forty-seven cases, additional cases are reported by Wright,[38] Browne,[39] Scheinmann,[40] Lentiagne,[41] Toeplitz,[42] Hjorth,[43] Cutter,[44] Schnitzler Frisch,[45] Bissell-Hagen[46], and while they occur early in life, more frequently than do carcinomata, there are but a few cases on record under 20 years of age Bosworth[3] records the case of Caselli at 19 years, Browne[39] one at 9 years, Carlos Labus[47] one at 13 years, forming, with the one here reported at 16 years, four under 20 years of age

The intra-laryngeal method of removal is quite universally condemned, although the cases of Scheinmann, Toeplitz and Labus were thus cured

The points of special interest in this case are 1, the rare combination of paralysis and sarcoma, only one other case, by Cohen,[48] of paralysis and tumor being recorded, 2, the cause of the abductor paralysis, 3, the occurrence of a rare form of laryngeal neoplasm, 4, the age of the patient, 5, the apparent cure, after two years, by the intra laryngeal method

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CHRONIC NASO PHARYNGEAL INFLAMMATIONS, AN ETIOLOGICAL FACTOR IN THE DISORDERS OF DIGESTION AND EXCRETION

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

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MANISTEE MICH
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To maintain the highest standard of health, it is of the greatest importance that the alimentary mucous membrane and its anatomical structures should retain their physiological activities For upon the perfect, performance of the functions of the gastro intestinal mucous membrane, assisted by the glandular secretions of the liver and pancreas depend the processes of digestion, absorption, perfect blood construction, and the maintenance of healthy nutrition Any pathological deviation from the physiological standard can only result in a corresponding impairment in structure or function, proportionate to the extent of membrane and structures involved Owing to the sudden and frequent fluctuations of temperature and humidity in the lake regions, it is difficult to find a child, who at the age of seven years does not present advanced proliferative inflammation of the nasal mucous membrane A hypertrophic catarrhal inflammation not infrequently develops simultaneously, or is concomitant with, the exanthematous fevers The portion of mucous membrane primarily involved is the anterior tips of the inferior turbinated bodies, extending usually along both lower and middle turbinateds to their posterior aspects in the naso pharyngeal space The activity of cell proliferation, and resultant hypertrophy of the turbinated bodies provoke irritations, and hyper secretion of mucus follows, which gravitates into the naso pharynx As the process of the inflammation advances in the nasal cavities, it extends by continuity of structure along the mucous membrane of the naso-pharynx, thus increasing the area of excessive mucus production, which of necessity gravitates along the posterior pharyngeal wall, until it reaches the oro pharynx, in which location it is found to have lost its watery consistency, by the evaporation sustained in its passage over a superheated and inflamed membrane, causing it to become thick, tenacious and adherent During the process of ingestion, adhesive mucus contaminated with microorganisms, and products of decomposition from various sources, are conducted into the stomach in the act of deglutition, along with food and drink

Mucus being a ferment, will in presence of starchy and saccharin material, develop pathological fermentation of the gastric contents The persistence of this condition will in due time (owing to the irritative nature of the fermentation products) develop inflammation of the gastric mucous membrane With inflammation of the organ derangement of function follows a vitiated secretion, abnormal in quality or quantity takes place, the chyme is imperfectly formed toxic and intermediate sub-oxidation chemic compounds are developed, all of which reduce the nutritive value of the gastric and intestinal contents, and aggravate the local distress Defectively formed chyme, laden with toxines or leucomaines, when subjected to the digestive fluids in the duodenum and jejunum, will in turn so interfere with the chemic, digestive and bacterial influences of the normal processes as to retard their oxidations and metabolic transformations, in short, producing a chyle of low nutritive value, surcharged with morbid products in consequence of imperfect chemic action, invariably resulting in sub oxidized, toxic, chemic compounds If these conditions continue to exist, the development of an inflammation of the intestinal mucous membrane, of a low grade of action, would only be a question of time

Mucus being the normal secretion of the mucous membrane, when excessively increased in quantity, due to irritation or inflammation, it becomes the mildest product of the inflammatory exudations By persistent irritation, the inflammation of the mucous membrane increases in severity and extent until its mucoid transudations and fermentation products exert a morbid action upon the entire assimilative portion of the intestinal mucous membrane These conditions often continue for a long period of time, by a low grade of action, and it is only after the individual becomes sufficiently debilitated by deficient nutrition, that the nervous system gives the alarm of impending danger This may not occur until anemia has placed its stamp upon the patient

Another important influential factor, in part responsible for the failure of complete and final oxidation of chemic products, as they appear in the blood, in consequence of defective intestinal, interstitial and intra cellular oxidation, is directly attributed to deficient respiratory action, (nasal and pulmonic) whereby the blood corpuscle does not obtain the necessary oxygen for the conversion of its hemoglobin into that of oxy-hemoglobin. It is to the oxygen-carrying function of the hemoglobin of the red corpuscles of the blood, that we owe the completion of the chemic oxidations of the incompleted sub-oxidation compounds therein contained, whether such substances are destined for tissue reconstruction, or for excrementitious elimination. It is here, also, where further oxidation is required to bring about the normal changes in peptones, leucomaines, etc. So that the liver as a gate keeper for the portal circulation, may be able to completely elaborate the albuminoid products for nutrition and excretion, and restrain those compounds from entrance into the general circulation which are detrimental to the organism, pending such chemic action or change as to render them safe for nutritious distribution, or harmless for excrementitious elimination. Under such conditions, the patient, when subjected to the exposure of sudden changes of temperature or humidity, excessive indulgences or fatigue, may by any change in the normal activities, or by defective eliminations through the emunctories, experience a chill, and a rheumatic fever follow. Or a neuralgic condition may develop in consequence of retained poison in the system, acting as an irritant to sensory nerves.

By such retention of toxic material in the blood, auto-intoxication is almost without limit, in its evil effect upon the tissues and structures of the human body. In this manner, a large percentage of the insomnias, many of the mental conditions, as morbid fears, melancholia, irritability of disposition hallucinations, impaired memory, etc., are satisfactorily accounted for.

In conclusion, chronic naso-pharyngeal inflammations are autogenetic in the development of secondary diseases of the gastro-intestinal mucous membrane, through deglutition of mucoid products or by continuity of structure, and by reflex action. The removal of the primary lesions will correct, relieve or cure, secondary remote effects of the digestive, broncho pulmonary or nervous systems.

Further, owing to the perverted chemic, bacterial, and digestive processes of the small intestines, the more or less extensive chronic catarrhal inflammation of the intestinal mucous membrane and glandular structures, the absorption of a deteriorated chyme and chyle is continuously going on, blood deterioration and contamination is constantly taking place, the circulation conveying poisoned blood for distribution, by nutritious arteries, to the various tissues and structures of the body.

Is it, then, a wonder that the telegraphic system should give a painful neuralgic alarm, as an indication of deprivation of some structure? Is it a surprise that the delicately constructed nervous system should fail to render good service, in the innervation of the muscular fibers of the intestines, rendering them defective in their vermicular activities and in a like manner fail to cause glands and ducts to give up their secretion?

To this failure is attributed the common complaint, constipation. From defective digestion with development of gases (abnormal fermentations) cardiac palpitations frequently occur. From incompleted nitrogenous transformations, we obtain uric acid and urates, instead of the completed product, urea. From incomplete oxidations of the starchy and saccharin material, we obtain oxalic acid and oxalates, instead of carbon dioxid and carbonates. The transportation of such products through the renal system, is a prolific cause of renal and vesical irritations and inflammations. Such irritations and inflammations give rise to not a few distressing symptoms, viz., lumbago, myalgia, despondency, melancholia, frequent micturition, dysuria, etc. There can be but little doubt, that a large proportion of structural, renal and cystic diseases take their origin from a continuous toxic and irritant urine. To the incomplete oxidations we owe the origin of uric acid and urates, oxalic acid and oxalates, which we find constitute the nuclei and substance of renal and vesical calculi.

As near as I have been able to ascertain, fully 66 per cent. of renal calculi are composed of uric acid and urates, oxalic acid or oxalates, separately or combined in alternate layers, but almost invariably containing a uric acid nucleus. These are considered by Prof. Christian Fenger, as aseptic calculi. While the largest percentage of the vesical calculi are composed of phosphates, either separate, or in combination with urates and oxalates, these are most frequently secondary to inflammation, with decomposition of urine, and hence may be considered as septic calculi, but in some cases the phosphatic constituents are due to excessive nerve disintegration.

It is, therefore, of the utmost importance to recognize the necessity of maintaining the mucous membrane of the body in a healthy and physiological condition. It is the one great essential in health, and it is equally essential, to approach as near as possible to the physiologic condition in the treatment of disease, if the physician desires to obtain the greatest success.

THREE CASES OF REFLEX NEUROSES ORIGINATING IN THE NOSE.

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association.

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It is my intention to place the following three cases of reflex nervous phenomena before you with little or no comment. They are each striking in their way, and well worthy to be put on record. The first case was as follows:

Case 1.—Mrs. P., a nurse age 28, anemic and of a nervous temperament. She complained of failing sight, had difficulty in reading the clinical thermometer. For this trouble she had consulted Dr. Bettman, who referred her to me. The treatment which she received previous to the time of her consulting me will be given in Dr. Bettman's notes which follow and for which I now take the opportunity of expressing my thanks. I found on examinatien that there was a slight congestion of the palpebral conjunctiva, but the most striking feature was the difference in the size of the pupils, the left being dilated to twice the size of the right. On examining the nose I found in the left side a slight congestion of the mucosa covering the middle concha, while the anterior fourth of the middle turbinate was the seat of an enlargement about the size of a small gooseberry, quite hard, and bleeding easily when touched with a probe, being partially denuded of epithelium. This growth was shown to be a hard hypertrophy under the microscope. The pressure caused by this hypertrophy against the septum was so great as to make the passage of a probe through the fissura olfactoria quite difficult. The examination of the right nostril gave negative results. I determined to remove the hypertrophy by means of the cold snare. After cocainizing thoroughly with a 10 per cent solution, I noted no change in the dilated pupil, but this did not influence me in any way, as the cocainization had little or no effect in diminishing the hypertrophy There was nothing of moment in the operation The day after, the pupillary dilation was greatly reduced, two or three days afterward the dilation was as great as ever, but I could justly account for this, by the fact that the pressure of the scab covering the point of operation was as great as that of the original hypertrophy, I did not take this away at once, but waited two or more days and then removed it, after which the pupillary reaction gradually became normal

Allow me to add that in this case I found a hysterical deafness, that is to say, the watch, speech and tuning fork tests gave normal reaction, but, as she said, "while she could hear what was said, she could not always understand, and was obliged to have sentences repeated" I would like to say too, that I was not sure that the pressure caused by the hypertrophy was the cause of the pupillary dilation, but there were ample indications to justify me in the removal of the pressure The results were gratifying

Case 2—Miss B, a nurse, aged 27, was also of a rather nervous temperament, but not so markedly as in the first instance, the left pupil here was dilated to 7 mm The right measured but 4 mm in diameter On examining the left nostril, a diffused redness of the mucous membrane was apparent There was no hypertrophy, but the anterior head of the middle turbinated body was so bent as to produce marked pressure against the septum Having the experience of the previous case before me, I determined to remove as much of the turbinated as caused the pressure, which I did by means of cutting forceps, the results in this case were not so satisfactory as in the first, as the pupillary dilation diminished only gradually, and the last time I saw the patient, while it was greatly diminished in size, the left pupil was slightly larger than the right

Dr Bettmann's Notes

Case 1—Mrs P came to me in May, 1892, complaining of inability to read the markings of the thermometer Upon examination I found the following conditions Vision, both eyes equal to 20 20, accepted + 0 5D both eyes Right pupil dilated (medium), left pupil one-half again as large No reaction to light or on convergence Can not read ordinary newspaper print With × 1 5D reads fine print at twelve inches, muscular equilibrium normal, ophthalmic examination negative Diagnosis paralysis of sphincter muscles of irides and accommodation No history of diphtheria, rheumatism, or syphilis Recommended galvanic current and injections of strychnin This treatment was carried out for two weeks, without producing any improvement in her condition I then referred her to Dr Pierce, who operated with instantaneous effect on the ocular symptoms The day after the operation the pupils were normal in size and reaction and she read the finest type at close range A few days later—as soon as a crust formed over the wound—the abnormal conditions of the eye returned, to disappear again permanently as soon as the scab came away

The changes in Case 2 Miss B, were similar to those already reported, the reaction to light very slight on convergence Vision = 6-12, with × 1D V 6-6 both eyes Can only read fine print with her glasses The ophthalmoscope revealed nothing abnormal Advised the patient to consult Dr Pierce for examination of the nose Dr Pierce operated, and the operation was followed a week later on exposure to cold by an acute catarrhal otitis media and a mastoid-periostitis, both of which yielded readily to treatment The ocular symptoms had previously disappeared

A third case I wish to report, was a patient referred to me by Dr Fenger of Chicago A farmer from the interior of Illinois, strong framed, muscular, plethoric Complained of a constant pain in the right half of the tongue He consulted Dr Fenger, fearing cancer, who, not finding any pathologic change in the tongue referred the patient to me On examination, I found an extensive hypertrophy of the inferior turbinated body on the right side, causing complete obstruction and a marked degree of pressure in that region Operation was performed by means of galvano-cautery In three days the pain in the tongue had entirely disappeared, and has remained absent ever since—a year having elapsed since the operation was performed

REPRODUCTION OF THE UPPER AIR-PASSAGES BY PLATING CASTS OBTAINED BY THE CORROSION METHOD

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association

BY B ALEXANDER RANDALL, M D
PHILADELPHIA PA

While it is no new thing to obtain, in metal or other materials, casts of the cavities or structures of the body, and exquisite results have been long and by many workers obtained in this field, there yet remains much to be thus demonstrated to the scientific world at large, and far more in the way of local demonstration It is with this latter object that I desire here to bring forward some of my results, believing that they will be new to some and interesting to others who work in the upper air tract Made in fusible metal, which can be readily cast into the soft tissues of the recent cadaver, these metal casts have a delicacy and a durability far superior to anything which is possible with the more frequently used wax mass, and the secondary process which I have here employed has marked advantages and seems to constitute a new and important step in this matter

All of these casts have the grave disadvantage, which grows with the increased complexity of the object, of being negatives only, and a comprehension of their real teaching can be gained only by a process of mentally turning them inside out, which many persons find very difficult and unprofitable They are often needlessly costly, too, since one can lock up many pounds of expensive alloy in a single cast But if the solid cast can be electroplated and its metal then fused out to leave the thin shell of deposit, we have a repetition of the negative almost as true and quite as instructive as before, while we have absolutely reproduced in a permanent and convenient form, the hollows of the organs originally molded Strong as is the fusible metal, it is yet so heavy that casts made of it are very apt to fracture if dropped, and my idea, as a teacher, is that preparations too delicate to take some chances of rudeness of handling are of little value except to the original student They may be marvels of beauty and accuracy, full of new and instructive points, but all of this is lost to those who can not handle and closely study them These electrotypes can be featherweight reproductions if desired—delicate as the empty shells of a collection of birds' eggs—yet safe for any reasonable handling or transportation Carefully sectioned, before or after the removal of the fusible metal within, they can afford new possibilities of study and reveal much which might escape observation, even when both interior and exterior are thus accessible

The first results which I have now in hand to bring forward are in many respects rude and unsatisfactory, yet are delicate enough to reveal all the shortcomings of the original casts They illustrate that the primary casting in fusible metal should be done with all care and accuracy, and with due consideration of the aims, difficulties and possibilities of the method The metal had best be fused in a water-jacketed funnel capable of containing several pounds, so that a superabundance may be present to secure full fluidity of the material and completeness at one casting without requiring any supplementary pouring, even if a good deal should be lost through some unexpected leakage This last mishap calls for the aid of some efficient assistant who shall stand ready to stem such flow, and do anything to aid in perfecting the result Thus cast, with foresight in arranging for the escape of air from all the cavities and a normal disposition of the preparation so as to avoid distortion, exquisite results can be obtained from adequate material, the main difficulty in America, being to obtain such material in any quantity, and at times when the experimenter really has the leisure to utilize it This has rarely been my good fortune, hence my preparations fall far short of what the method might afford

As to the electroplating, the main point is that it should be slowly done, in order to obtain due evenness and smoothness Any forcing of the process will give lumpy distortions which may greatly impair the accuracy and beauty of the operation

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BICHLORID OF MERCURY IN THE TREATMENT OF DIPHTHERIA

Read in the Section on Laryngology and Otology, at the Forty fourth Annual Meeting of the American Medical Association

BY CHARLES F McGAHAN, M D
AIKEN S C

I wish to call attention to the treatment of diphtheria by the bichlorid of mercury, not that I regard it as a specific in the disease, for I am sure that all of us who have had much experience with this most treacherous malady will agree with me that there is no such thing as a specific for it Various modes of treatment have been followed by me, and frequently with such success in different epidemics that I felt on several occasions I had found a cure, but each time my hopes were crushed by having the treatment fail entirely in the next series of cases which fell under my observation I have made this statement so that all can see that I am not reviving this treatment, in the expectation of having it considered a "cure-all' for the disease, but simply because I believe that if the profession would use it more extensively, and in larger doses, that we should have better results

In one of the latest works on general therapeutics we find, in laryngeal diphtheria, "one one-hundred and fiftieth to one one hundredth of a grain of bichlorid may be given every hour, for not over four days, and it must be carefully watched" This dose is not large enough to be of any service, if we have a true case of diphtheria to deal with In fact, we can diagnose a case of diphtheria by the way the patient bears the bichlorid of mercury I will give the history of one case, so as to illustrate the manner of giving it

On February 13 I was called to see a patient, a lady over sixty years of age, who was suffering from a sore throat Upon examination, I found the fauces very red, and not then suspecting diphtheria I prescribed peroxid of hydrogen (Marchand's) one to four, to be sprayed four times a day, and an alterative When calling on the 14th, I found both tonsils covered with membrane The patient was immediately put upon one-fifteenth of a grain of bichlorid of mercury every hour and a half, and to be sprayed every hour, alternating with bichlorid of mercury one one-thousandth and peroxid of hydrogen one to two The disease gained rapidly and by the next day the pharynx, larynx and nasal passages were covered with membrane For the first four days the patient took one-fifteenth of a grain of bichlorid of mercury every hour and a half, and for the four following days she took one fifteenth of a grain of bichlorid of mercury every two hours Besides this, during the eight days her throat was sprayed every alternate hour with bichlorid of mercury one one-thousandth, and enough solution was atomized each time to vaporize one-tenth of a grain of bichlorid of mercury, making one and one half grains of bichlorid of mercury sprayed on the throat every day, and some days it amounted to even more, for when the disease was at its worst I used the bichlorid of mercury every hour

In spraying, the larynx, pharynx and nasal cavities were sprayed During the eight days over eight grains of bichlorid of mercury were given by the mouth, and about twelve grains sprayed into the larynx, pharynx and nasal cavities

The only bad effect I had from the bichlorid was great depression which was counteracted by giving whisky freely The throat was so covered with the membrane that my patient could not swallow for thirty-six hours, and nourishment was given by the rectum, and bichlorid through a tube passed in through the nose Her recovery was very slow, and she suffered with paralysis of the vocal cords for over two months, but it gradually yielded to treatment

In conclusion, I wish to impress you with the importance of giving bichlorid of mercury in large doses, in diphtheria, and do not be afraid of it

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CLINICAL EXPERIENCE WITH SOLUTIONS OF PYROZONE

Read in the Section on Laryngology at the Forty fourth Annual Meeting of the American Medical Association

BY JAMES E NEWCOMB, M D
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About thirty-five years age, Sir Benjamin Ward Richardson introduced into medical and surgical practice the use of solutions of hydrogen dioxid For a quarter of a century or more, he was their only advocate With considerable distinctness he pointed out their application to various clinical conditions He carefully recognized their limitations and while making for them broad claims, did not regard them as a panacea for all ills During the past few years, he has had many imitators of his advocacy They have gone far beyond him in their claims of therapeutic results They have, unfortunately, fallen short of him in honest conservatism They have forgotten the counsels of this therapeutic pioneer, have made wild and untrustworthy statements, and have thus tended to bring the remedy into disrepute They have had as allies some of the manufacturing chemists, whose wily rhetoric has been far more specious than their appreciation of the problems of clinical medicine has been accurate

Richardson strongly insisted that it was impossible to prepare more than a ten-volume stable solution in water, to exceed this limit required a degree of acidity so great that, on exposure to the air, the solution rapidly ran down in oxygen strength, the H_2O_2 becoming practically H_2O A true and honest ten-volume solution has only a very slight degree of acidity. Anhydrous hydrogen dioxid is described as a syrupy, colorless liquid, with a styptic taste and a caustic action. It has a specific gravity of 1.45. It is a very unstable compound and hence is used in commerce only in diluted strengths. 'Confusion seems to exist with regard to the meaning of the term "volumetric solution." A fifteen volume solution, granting that such an one is a durable possibility, is to be defined as one which yields fifteen times its own volume of oxygen gas. Such a solution would, according to the calculations of Smith and Oertel, (*New York Medical Journal*, Aug. 6, 1892) contain, in 100 c.c. of fluid, 4.25 grams of the pure hydrogen dioxid. Out of fifty specimens of various brands, purchased by these observers in open market and analyzed by them, not a single one contained 4.25 grams. The highest approximation thereto was 2.50 grams. The average of the whole number was 1.78 grams. 2.50 grams correspond to an eight and eight tenths-volume solution. Smith and Oertel found a great discrepancy between the different specimens from the same manufacturer. Eight per cent of all the specimens contained no hydrogen dioxid whatever. Thirty-six per cent were decidedly deficient in strength. Squibb (*New York Medical Journal*, ibid.) from analysis of a large number of various specimens, found only one with more than a ten-volume strength.

Undoubtedly the weaker solutions keep better, especially in warm weather. Decomposition is detected by the sight of the bubbles of escaping gas. Fairly pure solutions may be so concentrated by evaporation as to approach a thirty- or forty-volume strength. These solutions are distinctly acid and fairly stable, especially when dissolved in ether.

Such solutions entirely without acid, with ether as the solvent, are now on the market under the trade name of "Pyrozone Solutions." I have used them to considerable extent during the past few months, and have formed some definite ideas (which are, I hope, logical) as to their therapeutic value.

Pyrozone, which is here used to indicate the character of the formula H_2O_2, is taken from the Greek word for fire, and the word ozone. Pyrozone, or H_2O_2, is supplied in three solutions, viz: pyrozone 3 per cent solution aqueous, referred to as medicinal; pyrozone 5 per cent solution ethereal, referred to as antiseptic; pyrozone 25 per cent solution ethereal, referred to as caustic. The figures in this connection refer to the parts by weight. We have, therefore, in this series of preparations the advantage of knowing precisely how much of the agent we are using. The pyrozone 3 per cent solution corresponds to the so-called fifteen-volume solutions of peroxid of hydrogen. The average specimens of hydrogen dioxid on the market contain, as we have seen, only one and one-half per cent. The pyrozone 25 per cent solution contains a very large amount of H_2O_2 approximating the pure product, as a result of its volatile vehicle.

It goes without saying that all containers must be of glass; metal should be avoided. Glass or hard rubber tubes will answer for the spray when pyrozone 3 per cent, solution is used, and cotton wrapped splinters or glass rods roughened at the end, so as to retain the cotton for local application of the pyrozone 25 per cent solution. The pyrozone 5 per cent solution does not seem to me to have a place in rhinology. It is too strong for some purposes, and too weak for others.

Regarding the mode of action of the remedy, it is generally admitted that purulent matter possesses the power of liberating the oxygen from the solution, as evidenced by the ebullition of bubbles of gas. Bacteria also, it is claimed, possesses this power. I have used the pyrozone 3 per cent solution for cleansing the nose and naso-pharynx whenever there have been crusts or inspissated secretions. The full strength has been employed anteriorly by a small pyrozone atomizer, and posteriorly with the ordinary hard rubber syringe. It has not seemed necessary to dilute the solution. Care should be taken that it is slightly warm, as indeed should be all cleansing agents applied to these regions. On coming in contact with the tissues, it produces a momentary tingling which quickly subsides. In using this remedy, the impression has been forced upon me that we are not always as thorough in cleansing the nasal cavity as we suppose. Often I have used aqueous and oily sprays in the nostrils until they were apparently clean, but a succeeding syringe full of pyrozone 3 per cent solution would start up little masses of white foam, showing that a little of the secretion was still hidden somewhere behind some projecting shelf in the nasal cavity. In regard to the smarting produced, we have to remember that in this strength we are employing an aqueous vehicle, and I have not found the solution any more irritating to the average patient, than is the Dobell Solution or the Seiler Tablet, the latter of which I prefer.

The pyrozone 25 per cent solution should be handled with considerable care. A drop spilled on the hand causes some discomfort, but no deep action on the tissues. I have employed it to stimulate the healing of sluggish mucous patches on the tongue, cheeks and lips with much satisfaction. In one case of perforation of the palate, in a syphilitic girl of eleven years, it has proven more efficacious than nitrate of silver in stimulating the edges of the wound, and has led to a marked increase in the rapidity of closure. The patient is still under treatment with the iodid of potassium, and I hope for a complete recovery of this feature of the case. With reference to the destruction of hypertrophied turbinated tissue, I have not found it a substitute for either the cautery, the chromic or the trichloracetic acids. Its action in safe quantities seems to be entirely too superficial to effect the desired result. The surface has been first anesthetized with a 10 per cent solution of cocain, and the pyrozone 25 per cent solution applied on a bit of cotton wound around the end of the glass rod described, and held in contact with the tissue for, say, ten seconds. A false impression is produced as to the action at the time of use, as the re-agent produces a large white blotch, which is all the more prominent from its marked contrast to the red background of the tissue.

When all this clears away, however, it is seen that the penetration has been slight and only a very little tissue removed. If the pyrozone 25 per cent solution is rubbed in, it does not seem to produce an action deep enough to "tack" or bind down the exuberant tissue. Hence several applications are necessary to effect what could be accomplished by one application of the cautery or other destructive agents. The after effects have seemed to be slight; there has been very little inflammatory reaction, and the slough has come away by the third or fourth day at the longest I have been in the habit of coating over the area acted upon, with official collodion

On enlarged glands at the base of the tongue, if isolated, the pyrozone 25 per cent solution has given considerable relief to the symptoms incident to that condition If the adenoid masses have been large and aggregated so as to form physically a true lingual tonsil, the same objection has seemed to obtain as in the turbinated hypertrophies, but after all, we have to remember that it is on dead matter, rather than on living tissue that the remedy finds its own peculiar sphere of action

118 West 69th Street, New York City

A CONTRIBUTION TO THE TREATMENT OF WHITE SWELLING OF THE KNEE

Read before the American Orthopedic Association St Louis, Mo, September, 1893

BY A B JUDSON, M D
ORTHOPEDIC SURGEON TO THE OUT PATIENT DEPARTMENT OF THE NEW YORK HOSPITAL

White swelling of the knee belongs to a class of diseases which it is difficult to believe are not constitutional, and yet which are so modified in their progress and results by the influence of mechanical environment that, beyond the regulation of the diet, the administration of roborants and the observance of the laws of hygiene, the only treatment necessary is that which is carried on by mechanical appliances Not that treatment of this kind can abruptly arrest the disease and remove the traces which it almost always leaves in the structures which have been affected It will be a happy day when the advance of our science puts us in possession of the power to cut short this morbid action, and secure ultimate symmetry and normal ability

Until that day we may well give our best attention to methods of placing the affected member and the system in the best position to promote and take advantage of the inevitable rally of the defensive and reconstructive sources of nature For restoration to health and more or less complete function are certain to occur, except in most unfortunate exceptional circumstances

Speaking of hip disease Brodie exclaimed "Why should the disease be dangerous? The hip joint is not a vital organ!"[1] And this is not the less true of white swelling of the knee And in the case of children, among whom our patients are chiefly found, we have especial reason to expect, amid the countless transformations attending growth and development, an early occurrence of the favorable reaction in which the disintegrating process ceases and repair of the damaged structures, so far as may be looked for, sets in

As in the treatment of articular osteitis elsewhere, we seek to arrest the functions of the joint, which, in the present instance are two-fold, motion and weight bearing We are early taught that the function of a joint is to give motion to the otherwise rigid skeleton, but it is only later, when we are perplexed with the treatment of diseased joints in the lower extremities, that we are impressed by the observation that one of the important functions of the bones, which go to make up the joints of the lower extremity, is the duty of sustaining the weight of the body, or a large part of it, in standing, and of enduring the violent blows that are inflicted in rapid succession by the weight of the body in locomotion Therefore, it follows that, as the function of the knees is two-fold, our efforts to arrest function must also be two-fold We must 1, arrest motion, or fix the joint and we must, 2, relieve the joint of the duty of bearing weight I prefer to do these two things, in the joint in question by two separate instruments, one of which, the fixative brace, is to be worn constantly, while the other, the protective splint, or ischiatic crutch, is used when the patient is up, and removed during the hours of sleep

1 And first of fixation of the knee it is one of the very simplest problems in mechanical surgery, made so by the presence in the limb of a bony lever above and below the joint (ginglymoid), which practically has no motion except in flexion and extension How widely different from the problem of fixing the hip-joint which, a ball and socket, has flexion, extension, abduction, adduction and rotation, and practically no leverage at all above the joint The fixative splint for the knee is simply a lever, making pressure from before backward at the place of motion, and counter-pressure from behind forwards at two points, one remote from the joint, at the upper part of the femur, and the other, also remote from the joint, at the lower part of the tibia A bar of soft steel of suitable length is applied to the posterior surface of the limb To it are attached four cross-pieces each cross piece being riveted at the middle of its length, and curved so as to half encircle the limb The upper and lower transverse pieces are applied to the limb with the intervention of pads, while the middle pieces do not necessarily touch the surface of the limb at all, but have at each end a buckle in which pieces of webbing are tightened over the limb in front, one piece of webbing crossing the lower part of the thigh and the other the upper part of the leg If the apparatus is applied to a limb with the knee fully extended and the webbing straps tightly buckled, flexion of the knee is prevented and, as there is practically no lateral motion, this brace is an efficient means of fixing the knee, not immobilizing it, for immobilization, or the equivalent of bony ankylosis, is impossible by apparatus applied with the intervention of the vulnerable skin and the elastic and mobile subcutaneous tissues

When the knee is fully extended, this fixative splint arrests motion, but when used in case of deformity it is a convenient and efficient means of bringing the flexed knee into extension At the beginning the splint is to be applied with the upright bend to simulate the flexion of the knee, or to be a little straighter than the knee, and the straps are to be buckled more or less tightly, according to the tolerance of pressure, until after a few days of intermitting and gradually increasing pressure the flexion of the limb corresponds with the flexion of the splint With care and judgment the upright of the splint is then to be still further straightened and the pressure re-applied by tightening the straps and buckles as before In an ordinary case, coming under this treatment in the acute stage, this manner of correcting the deformity is easy, certain and painless, and we have the added satisfaction, while thus reducing the flexion, of arresting motion in the knee at the same time

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[1] Clinical Lectures on Surgery, 1846, pp 279 248

It seems paradoxical to say that we, at one and the same time, prevent motion and effect a change from flexion to complete extension This calls to mind the peculiar condition of an inflamed joint, a condition in which the muscles in reflex contraction hold the joint motionless, and yet not so rigidly motionless but that it may be moved by a force gentle, continuous, painless and harmless In the hip joint advantage is taken of this peculiar kind of immobilization, which is better called fixation, to correct the bad position of the limb, without mechanical force, by inducing the patient to adopt habitual attitudes and motions, chiefly the habit of walking in natural rhythm, in which a normal position of the limb gives the patient more convenience in locomotion than a deformed position With the mechanical advantages found in the knee, however, we can change the position of the joint, regardless of the patient's habits or convenience, by directly applying force through the leverage of the fixative splint

In this affection, as in all others producing deformity and disability through osteitis, the best ultimate result is to be sought incidentally while our principal efforts are directed to the promotion of recovery by the arrest of function Fortunately, in white swelling of the knee the means of arresting motion, or fixing the joint, are identical with those with which the final good position of the limb is secured

2 In the second place, we must relieve the affected joint from bearing weight in standing and walking, a problem very easy of solution by the use of a pair of crutches and a high sole on the well foot But axillary crutches, though sometimes necessary, may in almost all cases occurring in orthopedic practice, be laid aside in favor of the perineal or ischiatic crutch This, in its simplest form, consists of a steel upright, ending below in a foot-piece, shod with leather, and above in a horizontal semi-circular pelvic band, covered with leather, or better with hard rubber, carrying a padded strap for the reception of the os innominatum The same apparatus is used in the treatment of hip disease in certain stages, except that in white swelling of the knee the rigid knee-piece is discarded It is useful in order to prevent motion at the knee, which is harmful in hip disease, because it is inevitably accompanied by motion at the hip It is useless in the disease now under consideration because arrest of motion at the knee is secured by the fixative splint already described The ischiatic crutch is provided with a shoulder strap by which the weight of the apparatus is transferred to the opposite shoulder in walking and with the ordinary knee strap of webbing and the leather ankle strap The upright should be adjustable in length to accommodate the growth of the patient or, if there are many patients, uprights of different lengths may be kept in readiness Like any other crutch it is laid aside at night

A CASE OF ABSENCE OF UTERUS

BY O M DOYLE, M D

SENECA, S C

In September last I was requested to examine a colored woman under a warrant for insanity She had been married about ten years and had never been pregnant On inquiry, it was learned that she had never menstruated Examination revealed a hymen intact, very dense and tough This condition seemed a probable explanation of all the symptoms present, and it was determined that an operation was indicated

In presence of, and assisted by Drs J S Stribling and H R Hines, I proceeded to operate for what I supposed an imperfect hymen only After opening the tissues ordinarily making the structure, I failed to reach a cavity beyond, and by keeping one finger in the rectum as a guide, continued the dissection in the proper direction for the vagina, until at a depth of three or three and a half inches, a small opening or cul-de sac was found, and, protruding into it from above was a body thought to be the uterus, but as the os could not be found by digital examination, the opening was sponged out and a Sim's speculum introduced, which enabled us to determine that the posterior portion of the bladder was the organ exposed by the operation—that portion depending below the fold of the peritoneum—just where the mouth of the womb would be in a normal case To prove the correctness of the opinion as to the organ exposed, the bladder was catheterized which caused it to contract and pass out of sight

Thorough exploration of the parts was made, with the conviction on the part of all present, that the woman had no womb She was dressed antiseptically and put to bed, recovering from the operation in a few days

SELECTIONS

OPENING OF THE ARMY MEDICAL SCHOOL

The Army Medical School was opened November 1 in the Library and Museum Building of the Surgeon General's Office, Washington, D C The Surgeon General, the members of the Faculty, the passed candidates and a number of medical men interested in the development of this new idea, gathered in the assembly room of the School at a little before 3 P M Colonel Alden, as President of the Faculty, opened the proceedings

Surgeon General Sternberg's address occupied about half an hour He expressed his gratification at meeting his audience under the particular conditions of the occasion, and congratulated the passed candidates on the facilities which the School would afford them of learning from the practical experience of others what would otherwise cost them years of apprenticeship with perhaps many a mistake which they would have wished rather to have avoided He congratulated them on having for teachers men who had been schooled in the practical work of the Army Medical Department, during the progress of a great war, and who were able now to review their early experiences in the light of a fuller knowledge than they possessed at the time He thanked these officers for the earnest and helpful support they had given to his efforts for the establishment of the School and for the time and labor they had expended, while heavily charged with other important duties, in perfecting the arrangements for the course which was now commenced This course would be a valuable one to the Medical Department of the Army, as well as to the individual officers Young officers who were fortunate enough to be able to take advantage of it would perhaps never realize its full value Only those who had experienced the difficulties, annoyances and anxieties which it would be the object of this course to prevent, could fully appreciate its value

Up to this time a young medical man on being commis sioned in the Service found himself a military officer with no military knowledge or training, no knowledge of his rights, duties and responsibilities as a military officer These would be taught to him at this School By virtue of his commission he became a commanding officer and caretaker of men of the Hospital Corps, with no knowledge of military discipline, of drill regulations or of the methods of providing for the necessities or caring for the rights and privileges of the men under his command These also would hereafter be taught to him His responsibilities as a medical man were also infinitely greater than could be sustained by the knowledge which he had gained as a medical undergraduate during his collegiate course He became a sanitary officer although he had no practical knowledge of sanitary methods The duties required of him at a military post speedily showed him his deficiencies and he endeavored to remedy them, but had few facilities for accomplishing this Oftentimes he had to depend on subordinates older in the Service than himself for his instruction, but instruction of this kind was liable to be tinctured with errors and misapprehensions He gained his experience under difficulties Hereafter, however, all this will be changed The Army Medical School will enable passed candidates to fall in for service fully equipped and competent

It is not the intention to make an expert bacteriologist of every officer, but each would be expected to gain a thorough knowledge of the methods of bacteriologic research and of the practical deductions from the most advanced knowledge of this subject as bearing on the prevention of disease among the troops under his care Bacteriologic study in its application to medicine is in fact but another name for preventive medicine Nor is it the intention to make each officer a trained chemist The object of the laboratory teaching on this subject will be to give such a knowledge of chemic practice as will enable the officer to conduct his sanitary inquiries with intelligence and accuracy There is no such thing as a medical chemistry or a sanitary chemistry independent of the principles of general chemistry These must be learned, and in proportion to the fullness of his knowledge of them is the ability of an officer to apply them to special uses in medical and sanitary inquiries The Surgeon General hoped and expected that there would be a long continued future of usefulness before the school which was now being opened

Colonel Alden then began his course on the duties of medical officers He spoke of military discipline as constituting one of the distinguishing characteristics of military life, common to all branches of the service There is nothing mysterious about this term It simply refers to the prompt and unquestioning obedience due from subordinates to those in command, and which is essential to the efficiency of a military body It is by no means confined to the military service Where bodies of men have to be controlled, or where large and important interests are at stake, there is the same necessity for discipline and obedience, although from the absence of military forms and parade it is not so apparent The discipline and obedience among the employes of the more important railroads illustrate this The same thing is to a certain extent to be seen in large manufacturing establishments, and, coming to our own profession, the discipline in a civil hospital is necessarily to be strict because life and death are frequently at stake The necessity for discipline in the Army, which may seem a little rigid in time of peace, becomes at once apparent if we remember that war is the normal state of the military man and that peace is to him but a time for preparation for war The commander in the field must be promptly obeyed, implicitly and without question, or the success of the Army may be defeated Military discipline implies a prompt, loyal and unquestioning compliance with the orders of a superior Whether that discipline is irksome or not, depends largely on the temper with which the subordinate receives his orders If he recognizes discipline as an essential feature of military life, surrenders himself to it cheerfully and takes pride in the promptness and thoroughness with which he obeys orders there is no hardship in it Obedience then becomes a mark, not of servitude but of loyal devotion to duty The days of military despotism and tyranny have passed, the rights of the individual are so carefully guarded in this day and in our country that no one need fear that his liberty may be abridged or that unjust treatment will be sustained

Colonel Alden then spoke of the importance of the sanitary side of the medical officers' duties, stating that it was chiefly to perfect this side of their education that the Medical School for young officers had been established The position of the medical officer in the military body then occupied his attention, and Jonathan Letterman was cited "A corps of medical officers was not established solely for the purpose of attending the wounded and sick, the proper treatment of these sufferers is certainly a matter of very great importance and an imperative duty, but the duties of medical officers cover a more extended field The leading idea which should constantly be kept in view is to strengthen the hands of the commanding general by keeping his army in the most vigorous health, thus rendering it in the highest degree efficient for enduring fatigue and privation, and for fighting In this view the duties of such a corps are of vital importance to the success of an army, and commanders seldom appreciate the full effect of their proper fulfillment Medical officers should possess a thorough knowledge of the powers and capabilities of the human system, the effects of food, raiment and climate with all its multiplied vicissitudes, the influences for evil which surround an army and the means needful to combat them successfully When medical officers consider this subject all their high, special and important duties will naturally occur to them "

In speaking of the position of the Medical Corps, Colonel Alden remarked that it was for no selfish purpose that its members cared for rank, rights or privileges A better appreciation of the importance of the medical officer and the granting to him of larger powers for good would come with the increasing intelligence of the community and would be hastened by the demonstration of the intelligence, scientific attainments and efficiency of the Corps Rank fixed the pay and allowances of the medical officer and defined his precedence when serving in courts and boards, regulating also certain military courtesies due him The military title was official and sanctioned by the usages of the War Department Nevertheless, Colonel Alden seemed to consider it questionable whether medical officers had gained any in importance and consideration by assuming the military title of their rank, or whether they had not lost something After these preliminary remarks on general points, he proceeded with an outline of his course on the duties of the military medical man, dividing them into three branches 1, the duty of supervising recruiting to see that none but able-bodied and effective men entered the Service, 2, to prevent disease and preserve the efficiency of the troops, and lastly, to care individually for the sick and wounded of the Army

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Pathology of Influenza —The author who is Prosector at the Marien Hospital at St Petersburg, furnishes a detailed account of forty cases of grippe on which autopsies were performed These cases were all of individuals who were otherwise healthy On microscopical examination of the voluntary muscles, he occasionally found loss of the striæ, however only in isolated muscle bundles In three cases he discovered evidence of hemorrhage in the muscular tissue, and the resulting hematomas were so large that entire bundles of muscle fibers were involved

A closer microscopical examination disclosed the fact that there had been a parenchymatous bleeding, and probably a bleeding by diapedesis In the vessels were found numerous small microorganisms, and it may be inferred from this that there was nutritive disturbance of the vessels As the hemorrhages were invariably unilateral, the author concludes that the lesion involves the sympathetic centers

Pachymeningitis hemorrhagica interna he found only in one case, but in 50 per cent of the cases there was a hyperemia of the pia, and in two cases even bloody infiltration Suppurative cerebral meningitis was found in one case In those cases with bloody infiltration of the pia, there was found besides, hemorrhage into the lateral ventricles

As a general rule, Kusskow found the heart muscle soft, friable and anemic

A microscopical examination showed a calcification of the muscle cells, loss of the striæ of the shorter muscular fibers, while the longer fibers were unusually prominent Fatty degeneration was not found

In a preparation stained with Muller's fluid, Kusskow found enlargement of the muscle cells, with changes similar to those found in typhoid lesions of the bowels Hyperemia and infiltration of the pharynx and larynx, he found occurred quite frequently

Careful examinations of the capillary vessels of the lungs and bronchi were made The author calls special attention to the frequency of lobar inflammation In eight cases he found purulent infiltration, and of these six resulted in gangrene

The gangrene spots as well as the purulent ones, were wedge shaped, with their bases towards the pleura Capillary thrombosis, such as is described by Klebs he seldom found, but when so found it occurred in fibrinous plugs Venous thrombosis was much oftener discovered, as was also arterial thrombosis, but the latter not so frequently as the former

The spleen, in the majority of cases was contracted, only twelve were found to be enlarged These were also microscopically examined Changes in the intestinal canal were often found Peritonitis was never discovered, but the kidneys were usually affected

In conclusion, the author decides, on the strength of his numerous investigations, that influenza may be divided into two forms 1, hemorrhagic, 2, pyemic or septico-pyemic form, with purulent and gangrenous inflammation of the lung tissue and frequent metastases in other organs—*St Petersburg Medicinische Wochenschrift*

Urethritis in Abeyance during Acute Pneumonia—Boydan has reported, in *Wiener Medicinische Presse*, No 21, 1893, a case of a male of 18 years having profuse gonorrheal discharge, with marked pain on micturition, at the time of admission into hospital Four days later, he came down with a sharp attack of croupous pneumonia of the left lung, and during the next day all the urethral symptoms subsided On the tenth day, on the inception of convalescence from pneumonia the former symptoms returned with all their original virulence Barthélemy has seen two analogous cases where, during the acute stage of typhoid fever, a preexisting urethritis was not observed One of these cases had an epididymitis on the seventh day, going to show that the gonorrhea had not been cured, but had simply been in abeyance

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The Mississippi Valley Medical Association—We extract the following from our esteemed contemporary, the *Indiana Medical Journal* The truth is that the constitution referred to has not yet been printed and we have therefore no data at hand from which to verify the statement of our contemporary From what we learned from Dr Reynolds, however, we are of opinion that the statement in regard to geographical limits is too sweeping

> 'The Mississippi Valley Medical Association is, by virtue of the amendment to the constitution carried through at the Cincinnati meeting in 1892, a national society Practically it is nothing of the sort There is *one* national, general medical organization the AMERICAN MEDICAL ASSOCIATION, there is no need and no place for another No one seems to know and no one seems to be able to find out just why this change was made It appears to have been a case of 'follow my lead," but we *think*, in a wrong direction This year, as heretofore, the effort to give the Association a national character, was a failure It were hardly too much to say it has been a farce Outside the section of country bounded by Pittsburg on the east, Kansas City on the west, Detroit and Chicago on the north, and Kentucky on the south, there were not, so far as we know, ten physicians present The Association, originally the Tri State Society, would, we can not but believe, better fulfill its mission by devoting itself to the cultivation of scientific medicine and friendly intercourse among the physicians of the great Central West The attempt to do more looks like an unnatural inflation and has an unpleasant significance to many who believe that one general medical association, embracing the nation, is sufficient and should command united support With the various district societies around us—the new Tri-State the Southern Surgical and Gynecological, the Missouri Valley, and others, and the American Medical, embracing all, the Mississippi Valley Association finds its true place and its real opportunity in its old field It is to be hoped that it is not too late to bring it back to its original and logical position "

The Discovery of Modern Surgical Anesthesia—The *Virginia Medical Monthly* for October contained an article by the editor of this journal entitled, "A Contribution to the History of the Discovery of Modern Surgical Anesthesia" The object of the communication was to place before the profession some new data relative to the claim of the late Dr Crawford W Long of Athens, Ga, as the original discoverer of the anesthetic property of sulphuric ether These data pertained mainly to the alleged relations existing at the time of the discovery (1841–42) between Dr Long and a young man, P A Wilhite This Wilhite afterwards became a practicing physician (at Anderson, S C), and it was through information received from him in 1876 that Dr J Marion Sims presented the case of Dr Long to the profession (*Virginia Medical Monthly* May, 1877) The paper of Dr Sims was very unsatisfactory to Dr Long It contained many errors, the principal one relating to Wilhite himself

Sims' article makes it appear that Wilhite and three other young men were students in Dr Long's office prior to the events of 1842, that Wilhite related to Dr Long how he had playfully etherized a negro boy in 1839, *and that* Dr Long was encouraged from this story to believe that ether might be used to prevent pain in surgical operations

Our own paper was prepared from certificates, correspondence and other data which had been gathered by Dr Long *in support of his claim*, and which were kindly placed in our hands by the Long family Some of these papers are from Dr Wilhite himself One of them certifies that he entered the office of Dr Long in October, 1844, and that he heard Dr Long speak of having used ether to prevent pain in surgical operations, etc As to the negro boy incident, Dr Long appears to have known nothing about it until nearly forty years after it is said to have occurred, and then it was related to him for the first time by Dr Wilhite

From the evidence before us we were sure that Dr Wilhite had achieved a prominence in connection with this matter which he did not deserve His own letters to Dr Long (which Dr Sims never saw) relieve him from all possibility of credit in this connection One of them (Jan 16, 1877) urges Dr Long to furnish Dr Sims with certain information in order that he (Long) "might, and justly too, receive the credit of this great discovery" Wilhite told Sims in 1876 that "Long was the real and original discoverer of anesthesia, and believed he would be so acknowledged if all the facts in the case were fully set forth" So, from all the evidence, including Wilhite's own testimony, it becomes certain that he could not have furnished Dr Long with any assistance or suggestions whatever

Dr Long himself stated that he received his first intimation of the anesthetic possibilities of ether from observing a number of young men inhaling it in sport Several of them received small injuries, but felt no pain until the effect of the ether began to pass off His first opportunity to test the ether in surgery came March 30, 1842, when he removed a small tumor from the neck of James Venable Other operations followed somewhat slowly, and Dr Long waited for a case of capital surgery before publishing his results already obtained Then it was that his New England contemporaries were making their observations Their first case was operated upon Oct 16, 1846, and it took them just eleven days to *patent* their ether, and then publish to the world their great "invention'

Thus it happened that the credit of this discovery, the "priceless gift of applied anesthesia," has been bestowed upon certain parties while belonging properly to another But the profession has begun to recognize the merits of Dr Long's case, and the time is almost at hand in our medical history when he will occupy the position which he eminently deserves, as the real and unassisted discoverer of anesthesia —Editorial in *Atlanta Medical and Surgical Journal*

Probable Cause of the Limp of the First and Second Stages of Hip-Joint Disease[1]—By Harry M Sherman, A M , M D , San Francisco, Cal —There has never been published a satisfactory explanation or even description of the limp of hip joint disease Gibney and Barlow speak more fully than the rest, but do not explain the cause and mechanism of it The writer then gives his explanation At first he shared the quite general belief that pain and limp are practically one and the same symptom, the limp being due either to the pain directly, or to the effort to avoid pain But lately he has seen so many cases of limp without pain that he differentiates the two symptoms, and regards them as independent of each other The author has found that in the vast majority of his cases the initial lesion lies in either the head or the neck of the femur The region attacked by the disease becomes a mass of infected granulation tissue The bone-trabeculae are wasted, that is, there is destruction of functionating tissue, and hence the function of the bone is impaired proportionate to that destruction This structural weakness is not necessarily a late process but is contemporaneous with the initial lesion

As the head of the femur is at a distance from the center of gravity, the weight of the body throws a considerable strain upon the neck of the femur The nearer under the center of gravity the femur is placed, the less is that strain Under normal conditions there is with each step a tendency to assume such a position, namely the swaying from side to side In the first stage of hip disease the limp is at first only a slight increase of this sway, and can be seen only when looked for, and when the gait is not faster than a walk "During this first stage, while joint motion is checked at the extremes, it is still ample for the purposes of locomotion, and none of the stiffness which is so marked later in the disease is apparent" In the second stage, the area of infected bone increases and muscular rigidity lessens the joint motions Consequently the lateral sway increases, and progression on the affected limb is shortened The lateral sway soon reaches a maximum and is constant there, but is combined with other unusual movements, resulting from the crippled condition of the joint Crippling of extension causes the "element of stiffness," but is in part compensated for by the slight extension between the lumbar vertebræ Later, flexion is curtailed and proper advance of the foot is impossible, and whatever is accomplished is assisted by the swinging forward of the body by a rotation at the opposite hip Still later rigid flexion permits too little extension to let the heel touch the floor, and the patient walks on the toes with an up and down motion, and with great lordosis of the spine

All of these motions are caused by two elements 1, the lateral sway, and 2 the lessened joint motion The lateral sway begins as an increase of the normal movement grows into the swing which brings the body weight exactly over the head of the femur, and is an act instinctively taken to lessen the strain upon the structurally weak portion It is neither a limitation of a normal movement nor an increased compensatory motion in other articulations, but is an independent motion, and 'has all the semblance of a means adapted to an end"

The explanation offered suggests the presence of a "bone-sense," by which the appreciation of the work done is transmitted to the central nervous system If there is a muscle-sense why not a bone sense? The bones are supplied with the grosser sets of nerves as well as the other living tissues of the body In some tabetic cases the bone-sense, as well as the muscle sense, is apparently lost, as in one of the writer's cases in which the patient walked upon a disorganized great-toe joint "with neither limp nor pain, that is, he put upon the diseased and weakened bones the same strain that he did upon the sound ones," which is ordinarily not the case even when there is no pain

Osteo sarcoma of the femoral neck causes the same structural weakness of it that hip-joint disease does, and therefore a perfect imitation of the hip limp

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A Contribution to the Study of Club-Hand —By Reginald H Sayre, M D , Orthopedic Surgeon to Bellevue Hospital Outdoor Department[1]—Congenital club hand is a rare deformity Club hand resulting from an injury to the central nervous system, or to an unsuspected fracture of the bones at the time of birth, is not strictly speaking a congenital affection In congenital cases there are three varieties 1, the skeleton is complete and well-formed, 2, the skeleton is complete, but ill formed, 3, the skeleton is incomplete and distorted

The general belief is that most of the cases belong to the third variety The writer has seen in all five cases, only two of which belonged to this division In four of the five cases club foot in one form or another was also present

In milder cases, manipulation and retention in the improved position with plaster-of-paris is of great benefit In severer cases, section of tendons, ligaments and fascia may be necessary Open section is often preferable, and when the flexors are involved it is better to operate in the arm, cutting the tendons diagonally, slipping the ends by each other until the required length is gained and then suturing Two of the author's cases were due to great contraction of the flexors of the fingers, but neither of them came to operation In a double case, which is still under treatment, manipulation and plaster-of-paris is doing good work In another case, also under treatment, the child has right club-hand, right club foot and left lateral curvature The whole right side of the body is less developed than the left, possibly due to disuse, the right hand and foot being so deformed as to prevent even moderate use The club foot was recently cured by an operation In the club-hand, the radius and thumb are absent, together with the first metacarpal bone and several of the carpal bones, exactly which ones it is difficult to make out The hand was perpendicular to the arm on the radial and flexor side, the ulnar being curved 30 degrees to the radial side The carpus did not articulate with the ulnar, but was drawn up above its distal end and was attached to it by means of firm ligamentous bands

The writer first performed an osteotomy of the ulnar and corrected the curve After an ineffectual attempt, by several weeks of traction, to lengthen out the ligaments so that the carpus could be brought down to the end of the ulnar, he cut down upon the ulnar and separated all the ligamentous attachments from it but even then could not draw down the carpus sufficiently, and he therefore removed two carpal bones which he thought were the os magnum and the unciform The tip of the styloid process was then cut off, and the end of the ulnar was inserted into the gap left by the removal of the carpal bones The hand was dressed in the straight position, and after three weeks, passive movements of the wrist were begun with the object of creating a serviceable joint if possible The operation benefited both the position and the usefulness of the hand, although an apparatus is still worn to give strength to the wrist and to preserve a better position of the ulnar, which tends to slip a little from its position unless thus supported

The treatment of club-hand must depend upon the conditions existing in each individual case The writer's operation is the first one of the sort reported, so far as he is able to learn

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Blank Applications for membership in the Association at the Journal office

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[1] Abstract of paper read at the Pan American Medical Congress

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THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No 68 WABASH AVE CHICAGO ILLINOIS
F J REBMAN, LONDON AGENT, 11 Adam Street, STRAND LONDON

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SATURDAY, NOVEMBER 18, 1893

MEDICAL STUDY OF CRIME

Within the past few years a new field of medical study has been opened which promises a great revolution in both the theories and practice of science The prison physician who makes one or two visits a week and gives salts and quinin, or who makes cursory examinations to detect feigned diseases, is suddenly confronted with a new realm of science The coarse abnormal features, the cringing manners, and strange histories of criminals tell the story of disease and degeneration never dreamed of before These poor victims are found to be types of a distinct class that spring from certain distinct causes and conditions, and follow a uniform line of degeneration in obedience to a law that can be traced in part The study of the criminal by the Italian physicians has opened up this new realm, and pointed out the physical signs and symptoms of disease From this point of view, crime is a symptom of brain degeneration, and is controlled by laws and conditions that are not influenced by the present methods of treatment In England, for a period of over twenty years, *the prison population* has been noticed to follow a regular ebb and flow yearly The number of inmates would steadily increase up to July, when it reached its highest yearly level, then receded to the month of February when the lowest point would be reached This has been unvarying—year after year Why the smallest number of prisoners should be noted in February, and the largest number appear in July, is unexplained Why crime is more prominent in warm weather, and why prisoners confined in prisons are more difficult to manage in the summer are some of the many problems

The presence of a criminal class who are indigenous to the country, is very possible in the old monarchies of Europe, but whether they exist in this country or are likely to spring up from certain germ causes is not clear Crime and criminals of large cities seem to indicate that a new class of offenders are coming into prominence The question for the prison physicians to determine, is the heredity of criminals, the influence of seasons, climate, social status, occupation, *education, poverty, and other factors* which enter into the history of each one The records of crime are the only general facts now made, with some facts concerning the associate diseases common to prison populations

Are criminals a distinct class in this country, whose crime is always the same, and whose physical appearance indicate these abnormalities of conduct? Are such persons defective physically and mentally? Are they growths of degenerative inheritance from a past generation? or are they the products or growths of environment? Is the present method of treating crime curative or preventive? or does it increase crime and make the criminal more incurable? Are there physical conditions beginning in childhood *that develop into criminality?* Are there any mental defects or diseases, injuries or brain states, that *naturally* predispose to crime? Are criminals who commit crime against persons different from those who commit crime against property? These are the questions that have come into prominence by the works of LOMBROSA and others of this new school Already some of these questions have been answered, and the facts and statistics on which they are based indicate a very suggestive and startling field of inquiry While this is comparatively a new topic, already the list of papers and works *published* in Europe and this country amount to over a thousand in number Over a hundred *papers* and *monographs* mostly in German, French and Italian, are devoted to a study of the physical symptoms of criminals A late volume "On Abnormal Man," published by the Bureau of Education at Washington, D C, 1893, gives a very extensive bibliography of the literature of this subject

The prison population in this country is very large, and is no doubt as carefully housed and treated medically as in any part of the world Yet, strange to say, very few medical men connected with prisons have made any contributions to these topics A few clergymen and others have appeared in papers that were largely repetitions of the ideas of some foreign authors, and beyond this little or nothing has been done The work of DR WEY at Elmira, New York, is a cheering exception, and shows what a great field of medical study is all unoccupied in this country

Already the work of the medical man in a prison is found to be something more than dealing out pills and powders Crime and criminals are not to be prevented and cured by walls and locked cells The physician must help to solve this problem with his studies of symptoms and cases, and conditions that make up the criminal As an index of the profound ignorance of these new questions, and the value of medical care and knowledge a prominent Eastern prison is an example The physician, a recent graduate, receives $100 as a yearly salary, and makes one or two visits a week to a population of 500 The chaplain receives $800 a year, for a single service on Sunday

It is pleasant to realize the fact accorded by foreign authorities, that American physicians are pronounced leaders in many departments of medical science to-day But it is a source of extreme regret that American prison physicians should be practically unknown in this new field of medical study

BACTERIOLOGIC EXAMINATIONS REGARDING MEMBRANOUS CROUP, BY THE NEW YORK CITY BOARD OF HEALTH

DR HERMAN M BIGGS, chief inspector of contagious diseases, under the New York City Department of Health, has made a provisional report concerning his bacteriologic work for four months During that time, DR BIGGS has had occasion to examine thirty-six reported cases of membranous croup In all these cases, the membrane was limited to the larynx, or only slightly extended into the pharynx There was found, in thirty of these cases, the diphtheritic bacillus of LOEFFLER, often quite abundantly These cases were, therefore, really cases of laryngeal diphtheria In the remaining six cases the LOEFFLER bacillus was not found These were, therefore, cases of catarrhal pseudo membranous inflammation of the larynx, and are analogues of the non-diphtheritic cases of pharyngitis marked by a similar pseudo-membranous exudation In none of these six cases of croup, was the laryngeal disease preceded or followed by pharyngeal inflammation having the LOEFFLER bacillus in the exudate In five of the cases of laryngeal croup, having the bacillus in the membrane, there was a pharyngeal diphtheria both before and after the laryngeal trouble In fifteen of these cases pharyngeal diphtheria neither preceded nor followed the attack Three of the cases were preceded by pharyngeal diphtheria, while seven were followed by that complication So that during the last four months nearly 84 per cent of the cases of reported croup, referred to the Department for examination, proved to be genuine diphtheria Acting upon this report, the Department will probably adopt a rule calling upon physicians to report all cases of laryngeal croup, and to isolate the sick from the well

THE ADVERTISER AND THE MEDICAL JOURNAL

We notice that some of our contemporaries are very much exercised in mind on account of the fact that THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION receives its share of advertising patronage, and they take occasion to read a lecture to the Trustees of this JOURNAL for publishing some advertisements None of them have dared to specify what particular advertisement they would have omitted One of our critical contemporaries stole the lecture from an Eastern publication, without an iota of credit! This is a charming illustration of the high grade of morality practiced by some of the lecturers in question It might not be altogether out of place if we mention, quietly and with bated breath, that the very advertisements which the respected editors cavil about, appear in full display in their own advertising columns Nay, more, in the medical publication which originated the most recent lecture, there appear two advertisements which were declined by the advertising department of this JOURNAL The moral of this interesting story is plain That is, that an advertisement may be printed by a publisher's medical journal without question But when a journal managed solely in the professional interest publishes the identical advertisement, the latter journal's course "brings a blush of shame to the cheek," et cetera, et cetera We venture to suggest to our dear brethren that an occasional leader on sincerity, based on practice, might be of great service to them. The novelty of such writing would also give the writers a new sensation

A LIBRARY FOUNDED BY DR ROBERT BATTEY

As announced by the daily press, and published in this JOURNAL last week, this well-known surgeon of Rome, Ga , has expressed his intention of giving one thousand volumes of his most valuable books to the State Library of his State He asks that these volumes be made the nucleus of a medical reference library to which other physicians will freely contribute in the future, if his suggestion is suitably met by the officials at the State capital The need of the profession for such a reference library is one which has been often realized by him during his long and useful career It is his chief anxiety that his gift shall be suitably housed and made practically serviceable

LAY EVIDENCE OF INSANITY

A general rule of law forbids witnesses, not experts, testifying as to a mere opinion In some courts the line is drawn so closely that non-expert witnesses are not allowed to testify at all, touching sanity or insanity as a physical fact By the great majority of courts, however, such evidence is regarded as no violation of the general rule, and is admitted, says the Supreme Court of Nebraska, in the case of Shults v State, decided June 30, 1893, and just reported in 55 N W Rep 1080 Still this view of it does not permit non-expert witnesses giving what without doubt is a mere opinion, as for example, upon so vital a question as the legal accountability of a person for a homicide admittedly committed by him, or as that, at a certain date, such party knew the difference between the right and wrong of an act at that time committed by him The evidence of such witnesses as to the sane or insane condition of a prisoner is tolerable only as they testify to the existence of sanity or insanity as a fact What deduction is to be drawn from that fact is solely a question for the consideration of, and determination by, the jury For these reasons the evidence should, to qualify a non expert witness to testify as to a condition of sanity or insanity, show an acquaintance with that condition Only such intimate acquaintances of a person accused of crime as have seen him almost daily for several months preceding the date upon which the alleged crime occurred are competent, as non-expert witnesses, to testify as to his sanity or insanity Besides such testimony, being strictly limited to such sanity or insanity, it must also be confined to those occasions upon which the witnesses testify to having observed the conduct and appearance of the individual whose sanity is the subject of inquiry An inference by witnesses deduced from the presumed continuance of the condition which they previously observed, is not within the rule or the reason of the rule, which permits the use of this class of evidence

AMERICAN PUBLIC HEALTH ASSOCIATION—A CORRECTION

Our attention has been called by a valued correspondent to an error in our report of the annual meeting of the American Public Health Association The paper said to have been presented by Medical Director Gihon to the "Congress of Public Health," was a report made to the American Public Health Association, by himself as Chairman of a committee appointed at a previous meeting to report on the "Sanitary and Medical Service on Board Emigrant Ships" The same correction is also applicable to the report of Dr J N McCormack which was also made to the Association and not to the Congress

We hope to publish these reports in full at an early day

PUBLIC HEALTH

PREVENTION OF INTRODUCTION AND SPREAD OF DANGEROUS DISEASES

Special Meeting of the Michigan State Board of Health

[Reported for The Journal of the American Medical Association by Henry B Baker, M D]

A special meeting of the State Board of Health was held at Lansing Mich , Oct 27 and 28, 1893 The members present were Hon Frank Wells, President , Prof V C Vaughan, M D , Prof Delos Fall, M S , Samuel G Milner, M D , and Henry B Baker, Secretary The object of the meeting was for the purpose of conference relative to the subject of immigrant inspection and disinfection of baggage The execution of the law on this subject so as to protect the health interests of the people from the importation of diseases, without undue interference with transportation companies, is attended with many difficulties Inasmuch as under this law the rules framed by the State Board of Health have the force of law and must not only be sufficient to keep out disease but, under present circumstances, probably must also withstand attack in every court in Michigan, and perhaps in the United States Courts, there is need for calm deliberation and earnest discussion of every point involved, in order that the rules may prove useful and legal

In the maintenance of the system of inspection and in the measures taken under the law in case the execution of the law is opposed by railroad companies, as has been the case at Sault Ste Marie, there are many questions constantly arising on which it seems desirable that the Committee authorized to execute the system shall have the aid of the intelligent advice of all the members of the Board, after a a full explanation and calm discussion of the details of the work

There is also need for such preparation, discussion and formulation by the full Board, of the evidence of the necessity for each rule, that it shall be made to appear not only to the State Board of Health, but to a court or jury that each is a reasonable rule

The foregoing are the apparent reasons for a special meeting confined to the prevention of the introduction of diseases—a subject which, though of very much less consequence than the ordinary work of the Board for the restriction and prevention of diseases which have actually broken out in many places within the State, yet which seems sufficiently important to warrant the expense of an extra meeting, especially when we consider that through past action such dangerous communicable diseases are much less prevalent in Michigan than in any foreign country, and especially less than among those classes who come here as immigrants, and through such work at the border the ordinary work of the Board within the State will be made much more effective

One of the first questions put before the meeting by the President, was whether or not the inspection and disinfection at the Michigan border should be continued Bearing upon this question, it was mentioned by the Secretary that although the immigration is now comparatively little and the winter season is approaching, cholera is still present in most European countries, and the diseases which cause most deaths in Michigan and which are most liable to be brought in by immigrants spread most in, or following, cold weather These diseases are consumption, pneumonia, diphtheria, influenza and scarlet fever The Board voted that the inspection and disinfection shall be continued, and that the officers of the Board take measures to enforce the rules of this Board by action in the proper courts

Another question, by the President, was whether or not certificates of disinfection issued by the Canadian officers shall be accepted in lieu of disinfection at the Michigan border, when relating to baggage destined to settle in Michigan On this subject, the following resolutions, offered by Prof Vaughn, were adopted

Resolved That we instruct our inspectors at the Michigan border to accept and allow to pass all baggage bearing evidence from a properly authorized Dominion or Provincial officer that it has been disinfected in accordance with the rules of this Board, unless there is reason to believe that such baggage has been infected since leaving the Canadian point of disinfection ,

Resolved, That the above resolution be inserted in the Michigan rules under the head of Exception 4"

The greatest danger of the introduction of disease into Michigan at least so far as it is practicable to guard against it, is in the baggage of immigrants, for the reason that the quarantine and immigration inspections at our Eastern seaboard are likely to stop any person actually sick with a dangerous communicable disease This is particularly true relative to cholera And in the case of cholera, the germ of the disease is so easily destroyed that there is reason to suppose that a method of disinfection which is not sufficient for some diseases might be sufficient protection against cholera As a rule, baggage of immigrants coming through the port of New York is not disinfected, no attempt is made at disinfection For several months past, that coming through the Dominion of Canada has been subjected to such disinfection as was considered by the Dominion quarantine officer to be sufficient to destroy the infection of cholera

If the methods and practice of disinfection of the baggage and luggage of all immigrants at our Eastern seaboard were such as to inspire confidence as to sufficient protection against all dangerous diseases, Michigan, notwithstanding its position on the frontier and in the track of travel of most immigrants to this country, might rest content without maintaining a quarantine

The hope has been that, seeing the demand of Michigan for better protection from those other diseases which experience has proved are in Michigan of more consequence than cholera, the quarantine officers on our Eastern seaboard, or the United States officers, would take measures to so disinfect the baggage of all immigrants as to make it unnecessary to detain baggage for disinfection at the Michigan border The United States Government gave to its Marine Hospital Service an immense appropriation, therefore it was hoped that it would establish a system of disinfection of all baggage of all immigrants, as was voted to be desirable at the meeting last spring of delegates from the State and Provincial Boards of Health The Dominion of Canada adopted the recommendation of the State and Provincial Boards so far as to provide steam disinfection of all baggage not injured by steam This, with another provision which the Dominion officers thought sufficient to protect against cholera, has been in force at Quebec Although the Michigan State Board of Health has endeavored to guard against the introduction of other diseases than cholera, and accordingly its rules have required and still require more than is done by the Dominion of Canada, yet, at this meeting of the Board the following resolution was presented by Prof Fall

Resolved, That the action of the Dominion of Canada in disinfecting the baggage of all immigrants from Europe coming into its territory and the establishment of its admirable appliances for this purpose as decribed by Dr Montizambert, at the recent meeting of the American Public Health Association at Chicago, meets our most hearty approval We commend earnestly this action of Canada to the United States Government and hope that similar disinfecting plants be established by it at United States Atlantic ports and that the baggage of all immigrants to this country be disinfected We ask that this be done, not alone that we may be saved from threatened invasions of smallpox and cholera, but also that a vastly greater saving of lives may be effected from measles, diphtheria, scarlet fever, pneumonia, consumption and other diseases which are of much more serious concern to the people of this country than cholera or smallpox "

This meeting having been called especially to consider the prevention of the introduction and spread of dangerous diseases in Michigan, and a full year's work having just been completed (the first quarantine rules in the present threatened epidemic, having been issued Sept 6, 1892) Dr Baker suggested a review of the principal lines of effort which have been put forth by this State Board of Health, and a proper recognition of the efforts which have been so remarkably effective in the preservation of the public health in Michigan The first recommendation which issued from the office of the Secretary of the Board a little more than one year ago was a plea for such a thorough cleaning up throughout the State, with especial reference to water supply and the disposal of excreta that if cholera gained an entrance it should not find the conditions favorable to its spread An important method, many times recommended by this State Board, was the house-to-house inspection followed by the abatement of all nuisances found Another line of work, in which the local Health Officers cooperate with the State Board, is the surveillance of immigrants in order to be prepared for any dangerous disease which might be brought by them or by their baggage This has been possible through the notices supplied to the State Board by United States immigration officers and by inspectors at the Michigan border, and although it has cost the office of the State Board much labor it is believed that it has been worth what it has cost

The effect of the extra sanitary work in Michigan was at first very marked and on the whole has been worthy of note During the first quarter in which the extra work was unusual —being the last quarter of 1892—the sickness statistics showed a remarkable lessening throughout the entire list of diseases This was mentioned in the published proceedings of this Board Jan 13, 1893 During the first quarter of 1893, the sickness statistics show that smallpox, cholera morbus and scarlet fever were more than usually prevalent, but that many diseases including consumption which is the most dangerous disease of all were less than usually prevalent During the second quarter of 1893, the statistics show that scarlet fever and diphtheria were more than usually prevalent and a few diseases were less than usually prevalent During the third quarter of 1893, the statistics show that a few diseases including consumption, were less than usually prevalent in Michigan, and that 'no disease was more than usually prevalent " Thus on the whole, notwithstanding the great immigration and the threatening of cholera and other diseases from abroad, there has been less sickness than usual, entire freedom from cholera, and nearly complete freedom from smallpox

Dr Baker offered as a substitute for the resolution offered by Prof Fall, preambles and resolutions as follows

WHEREAS, Michigan has been remarkably favored by comparative immunity from dangerous diseases during the past year, while cholera has been and still is prevalent in most European countries, and smallpox and other dangerous diseases also have been and smallpox still is, prevalent in some parts of the United States, and

WHEREAS, It is believed that this comparative immunity from disease in Michigan has been largely due to enlightened efforts by sanitary officers, governments, corporations and individuals, not only in Michigan, but in our neighboring Dominion of Canada, in the States eastward of Michigan, in the United States Government, and in foreign countries, and

WHEREAS, This Board deems it wise to recognize these facts to govern our future action accordingly, and to commend these agencies which tend toward the welfare of our own people, therefore

Resolved, That the Michigan State Board of Health commends the action of all those individuals, corporations, communities, and sanitary officers in Michigan, who have wisely done what was practicable to be done toward the prevention of the introduction or spread of disease in our midst, whether such action was sanitary surveillance immigrants, sanitary inspections of premises, abatement of nuisances, or the prompt restriction of a dangerous disease,

Resolved, That the action of the Government of the Dominion of Canada, in providing for the disinfection of the baggage of all immigrants, is worthy of mention and commendation, that the action of the Grand Trunk Railroad of Canada in disinfecting all immigrants' baggage, carried by that railroad destined to settle in Michigan, in accordance with the rules of this Board, is especially worthy of mention and of hearty commendation , that the action of the Canadian Pacific Railway in disinfecting at Detroit, and also for a time at Sault Ste Marie all such baggage destined to settle in Michigan, is also to be warmly commended, and it is regretted that such commendation can not properly be extended to its branches in the Upper Peninsula of Michigan

Resolved, That the quarantine officers on our Eastern seaboard are to be commended for their apparent success in keeping out persons sick with cholera, and that the United States authorities are to be commended for the inauguration of systems of disinfection of immigrants' baggage at the foreign ports of departure

Resolved, That this Board warmly indorses, as it has heretofore earnestly advocated, the plan for the disinfection of all baggage of all immigrants at all times, and for other diseases than cholera, as it was recently unanimously voted by the Sanitary Section of the Pan-American Medical Congress at Washington

Resolved, That although sanitary measures have been and are increasing in efficiency, and the winter season is now approaching, yet cholera infection centers are scattered throughout Europe, and there is still danger of that disease reaching this country, and many of the communicable diseases most dangerous in Michigan are constantly liable to be brought in by immigrants, therefore this Board expresses the hope that all will continue to act for the exclusion of disease, and for the restriction of any dangerous disease within our borders, several of these diseases being of vastly more consequence than cholera

The resolutions offered by Dr Baker were not supported, The resolution offered by Prof Fall was adopted

At this meeting the Secretary read a paper on defects in the present quarantine law, considered from a social science standpoint He thought it none too early, while the work under the law was fresh in mind to study the facts and reasons why some of the plans of the present law were defective, with the view of formulating amendments in time to have them well considered, discussed and perfected before the hurry incident to a meeting of the Legislature shall make such work impossible As a starting point he read a proposed new section of law One point in his paper was agreed to by the President, but no formal action was taken on the subject at this meeting The next regular meeting of the Board is the second Friday in January, 1894

The State Board of Health of Pennsylvania —The State Board of Health, in a proclamation dated November 1, declares smallpox to be epidemic in Reading, and has issued orders and regulations looking to the prevention of the spread of the disease

The Board calls attention to the fact that as the weather becomes colder the ventilation of houses and public conveyances will be diminished, and the tendency of the contagion to spread greatly increased, and that the germs of the disease can be transported the entire length of the State in twenty four hours

The Board orders that all borough councils which have not established Boards of Health, as required by law, do so without further delay All Boards of Health are requested to report immediately to Dr Benjamin Lee, Secretary of the State Board the existence of the first case of the disease within their jurisdiction, and to make weekly reports thereafter of additional cases, deaths, treatment, vaccinations and precautionary measures, and also to publish a copy of the report in the local newspaper It is also ordered that all Boards of Health determine on a location for an emergency hospital for use if necessary, and make provision for free vaccination of those unable to pay for the service of a physician

County commissioners and poor directors are enjoined to be in readiness to provide emergency hospitals, nursing, medical attendance and food for persons stricken with the disease, not residing in incorporated municipalities and who are unable by reason of poverty to provide themselves with these necessaries

All city or borough councils or Boards of Health not having in force efficient regulations for the prevention or suppression of smallpox are enjoined to adopt a set of regulations promulgated by the State Board of Health, which are declared in force in all places having no local Board of Health

The regulations provide for the vaccination of adults and children who have not been vaccinated, and rule that no pupil shall be allowed to attend school who has not been vaccinated within seven years School officers and teachers must immediately report the discovery of a case of this disease among the scholars, and any householder shall immediately report a case in his family Physicians must also report cases that come to their knowledge Every infected house should be marked with a placard or flag

There are further regulations regarding the burial of persons dying from smallpox, the visits to public places of people from an infected house the riding in public conveyances of the same, and disinfection

For the purpose of the proclamation all cases of varioloid shall be considered as smallpox Failure to obey or violation of the regulations is punishable by a fine of $100

To Hold Sanitary Conventions —The State Board of Health of Iowa has decided to hold a series of sanitary conventions during the coming year

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Yellow Fever —One new case of yellow fever was reported at Brunswick, Ga , November 6 Surgeon H R Carter of the Marine Hospital Service, is also reported as seriously ill in the camp near that place

BOOK NOTICES

The Cholera Epidemic of 1892 in the Russian Empire, With Notes upon Treatment and Methods of Disinfection in Cholera, and a Short Account of the Conference on Cholera held in St Petersburg in December, 1892 By FRANK CLEMOW, M D , St Petersburg London and New York Longmans, Green & Co Chicago The W T Keener Company. Price, $3 00 1893

This book contains an account of the epidemic in Central Asia and Siberia, the epidemic in the Caucasus and European Russia, its distribution, method of spread, influences which determined the intensity of the epidemic, the famine and the cholera epidemic, the measures of the Russian Government (which includes an outline of the scheme of defense), measures on the Persian frontier, in Trans-Caspia on the Caspian Sea, and in the Caucasus, railways and water ways (particularly the Volga), the various notification forms and orders relating to disinfection, notes on the treatment of cholera in St Petersburg and the prophylaxis there The last chapter is given to the Russian Conference on cholera which was held in St Petersburg, December, 1892 The governor of each province, or government throughout the country, was requested to select one or two physicians who had had personal experience of the epidemic in the previous summer The total number of members thus summoned was 312 They met on December 13, O S (December 25 of our notification), and on all the seven succeeding days meetings were held daily in Michael Palace, and the sub committees met in the medical department of the Ministry of the Interior The transactions of this Conference fill a large volume and, says the author "The experiences of the members, who it must be remembered came from North and South, East and West, from the snows of Siberia to the tropical heats of Central Asia, from the mountains of the Caucasus to the plains of the Volga, all fresh from a life and death struggle with the ravages of cholera, afford material of no little interest to any one who is able to read them in the language in which they were communicated "

It seems we, in this country, have had little knowledge of the disastrous ravages of cholera as it prevailed in Russia, as the figures show the total of cases in the Russian Empire for the epidemic of 1892 was 555,010 and 267,880 dead It should be remembered, in this connection, that the means of disinfection and the sanitary measures adopted were fully in accordance with the latest teachings on the subject A reading of this book will increase our thankfulness that our country has again escaped a visitation during the present epidemic

The Blot Upon the Brain, Studies in History and Psychology By William W Ireland, M D, Edinburgh New York G P Putnam & Sons Edinburgh Bell & Bradfut Chicago A C McClurg & Co Second edition, pp 398 1893

This book is a study of diseased functions of the brain, such as hallucinations of sight and hearing, hereditary neuroses, fixed ideas, unconscious cerebration, wordless thought and relation of words to thought, left-handedness and right-handedness, mirror writing, and of the dual functions of the double brain It is rare that an author is enabled to invest highly scientific literature with the charm of romance or with the attractions of historic details, but in this case, under the illustrations of the "Insanity of Power," the author has spoken of the debasing effect of unchecked power, and gives as examples the Claudian Julian family, Augustus, Drusas, Julia, Tiberius, Caligula, Mohammed, Ivan the Terrible, etc Under hallucinations he refers to the character of the hallucinations of Mohammed, Martin Luther and Joan of Arc, and the cases cited through the book are of a most interesting character The style of the author is unusually entertaining, and it certainly adds no little to the value of the book that one is able to read it, without at the same time undergoing severe mental discipline

System of Genito-Urinary Diseases, Syphilology and Dermatology By various authors Edited by Prince A Morrow, M D, Clinical Professor of Genito Urinary Diseases in the University of the City of New York Vol II, Syphilology pp 917 New York D Appleton & Co 1893

In this volume, which has been devoted to the general study of syphilis, modern bacteriologic researches are given a prominent place, and the relations of syphilis to tuberculosis, rachitis, tabes, and many obscure diseases of the nervous system have received consideration The relation of syphilis to the public health and its socio-economic aspect have been touched upon The wants of the practitioner have been cared for by giving a practical turn to the various articles The illustrations are superior to those ordinarily encountered in works of this class, and the publishers call attention to certain new methods by which photography and lithography have been combined The typo gravure process in colors is employed in several of the works, and the illustrations, as a class, are finer than have appeared in any work submitted to us during the year The half tone reproductions are superior to any that we have seen elsewhere We have no hesitation in saying that this volume surpasses any recent work on the subject which has fallen under our observation

An Elementary Text-Book of Biology Comprising Vegetable and Animal Morphology and Physiology By J R Ainsworth Davis, B A Professor of Biology and Geology in the University College of Wales, Aberystwyte With numerous illustrations and glossary Second edition Vol II Price $6 00 London Charles Griffin & Co 1893

This work is divided in two parts, of which Part I is devoted to Vegetable Morphology and Physiology, and Part II to Animal Morphology and Physiology As a text-book, and not less as a book of reference, it deserves a place in the library The work is especially valuable at this time, when the schools are demanding higher requirements as preliminary to matriculation It will be found almost indispensable to those wishing to obtain a thorough groundwork for bacteriologic study Two centuries have passed since Francisi Redi published his classical experiments, *De Generatione Insectorum*, following William Harvey, who demonstrated that all life is from an ovum or seed The little microscope of Redi, simple though it was, was the lever that lifted the dark veil, which hid the passageway to the biologic discoveries, now tersely set forth in this work of Davis May the close of the next bi centennial show as great an advance!

International Clinics Vol III Third series, 1893 Edited by John M Keating, M D Judson Daland, Mitchell Bruce and David W Finlay Philadelphia J B Lippincott & Co

The series for this quarter includes clinics from the following American teachers Edmund Andrews, John Ashhurst, I E Atkinson, Norman Bridge, Henry T Byford, William B Canfield, I N Danforth, E D Fisher, Geo W Gay, Arpad Gerster, William Goodell, John B Hamilton, Frederick P Henry, M B Hutchins, E F Ingals, George M Lefferts, M D Mann, Thos J Mays, Chas K Mills, W O Moore, Paul F Mundy, Ohmann-Dumesnil, Roswell Park, F S Parsons Wm H Porter, A P Randall, A J Skene, James Tyson, R F Weir and others

The popularity of this series is growing year by year, and it is apparent that they are more useful on the subjects of which they treat (and what is not treated in the course of these clinics) than the ordinary text-book, for they represent the actual practice of gentlemen qualified to fairly represent the approved methods of the day The publishing of the work is well done and the illustrations are excellent

The Medical News Visiting List for 1894 Weekly (dated, for 30 patients), Monthly (undated, for 120 patients per month), Perpetual (undated, for 30 patients weekly per year, and Perpetual (undated, for 60 patients weekly per year) The first three styles contain 32 pages of data and 176 pages of blanks The 60 Patient Perpetual consists of 256 pages of blanks Each style in one wallet shaped book, pocket, pencil, rubber, and catheter scale, etc Seal grain leather, $1 25 Philadelphia Lea Brothers & Co 1893

This visiting list is one of the most useful The usual printed matter will be found The tables are accurate, the decimal doses are given and it has a valuable index whereby any part of the book may be readily found We notice the catheter gauge has the decimal or French scale and the alleged "American scale" as well The latter was never adopted by any authoritative organization, or by any considerable number of individual surgeons The decimal scale, founded on the subdivision of the meter, is now generally used even by the British themselves

The Orum System of Voice Education—By Julia A Orum Principal of the Philadelphia and Mountain Lake Park Schools of Elocution Philadelphia 1893

This little book begins with a "simple elucidation of the elemental functions of the body in the expression of sentences" The author has been engaged in the study and teaching of elocution, based on the Fennell method, for the past sixteen years and is therefore in a position to write ex cathedra on the subject

The action of the body in respiration is clearly stated, the philosophy of vocalization in singing, reading and speaking is given in easy lessons, and the work, on that account, will be found useful for young scholars, and perhaps for those children of larger growth whose habits of speech are not too firmly fixed to be changed

The Physician's Chart Book By J A Howkins, M D New York Bailey and Fairchild 1893 Price, 50c

This, as its name implies, consists of blank charts of temperature, respiration and pulse rate, of pocket size, bound in one volume

Chorea or St Vitus' Dance in Children By Octavius Sturges, M D , F R C P , Senior Physician to the Hospital for Sick Children London John Bale & Sons 1893 Second Edition Price 5s ($1 25)

This little work is occupied with a description of chorea, several hypotheses which have been provided to explain it, its alleged rheumatic connection, and its various complications In Chapter XI there are a number of illustrative cases, together with comments thereon The appendix contains an abstract of 177 cases In the matter of treatment, the author recommends care in hospital for the majority of cases In the matter of drugs, the author says "Finally, we come face to face with the question of drugs Apart from narcotics, whose use is limited to severe cases, and apart from ordinary medicaments, such as aperients, is there any drug directly serviceable in the sense of having some specific action? In my belief there is none" The author does not doubt the virtue of arsenic in certain cases and under certain limitations, but he does not believe in the indiscriminate use of any drug

Manual of Bacteriology for Practitioners and Students, with Special Reference to Practical Methods By Dr S L Schenk, Professor Extraordinary *in the University of Vienna* Translated from the German, with an Appendix by W R Dawson, M D , University of Dublin London Longmans, Green & Co Chicago The W T Keener Co Price, $3 00

The present is practically a new edition in English of Prof Schenk's "*Grundriss der Bacteriologie*" *published* recently in Germany The work includes chapters on the general morphology and biology of microörganisms, apparatus and re agents, nutrient materials and methods of cul tivation, examination of microorganisms under the microscope, bacteriologic analyses of air, water, earth and putrefying substances, pus organs and cavities of the body and their contents, respiratory tract, and in articles of diet In the Appendix, by the translator, is an account of Haffkine's alleged vaccination against Asiatic cholera, account of the parasitic protozoa, the action of light on microorganisms, and various formulæ The work is printed on first quality of paper, the illustrations are good, and it forms an instructive addition to bacteriologic research

Medico Chirurgical Transactions, Published by the Royal Medical and Chirurgical Society of London Vols LXXIV and LXXV London Longmans, Green & Co 1891 and 1892

These transactions represent what is best in London medical and surgical literature, as presented to this old and honorable Society The enumeration of the titles alone, with the names of the authors, would suffice to show the readers of the Journal the high character of the essays and addresses contained in these two volumes President for 1891, Timothy Holmes, for 1892, Sir Andrew Clark, whose death we noticed in the last number of the Journal

Text-Book of Normal Histology, Including an Account of the Development of the Tissues and of the Organs By George A Piersol, M D , Professor of Anatomy in the University of Pennsylvania Pp 439 Philadelphia J B Lippincott & Co

This book is intended to be a text-book on Normal Histology and a condensation of some of the larger works, and it is sufficiently full for the average purposes of the student Like all medical works emanating from this well known publishing house, the paper is good, the illustrations fair The histology of the different tissues of the body is well shown in the book The embryologic portion is placed before the discussion of the normal histology of each subject For those not possessing the large and exhaustive work of Minot, this portion of the book will be appreciated, but it must be confessed that there are great omissions in this branch of science Comparison with recent histologic textbooks of its class shows it to be concise, clearly stated, accurate and systematic, although it is not clear why the discussion of the development of certain tissues should be placed in some instances at the head of the chapter, in others in the middle, and in others at the end However, so long as it is stated in the book, one need not cavil As a whole, the book is to be commended as a painstaking and valuable contribution to the literature of the time

Leonard's Physician's Pocket Day-Book Bound in red morocco, with flap, pocket and pencil loop Price post-paid, $1 00 Published annually by the Illustrated Medical Journal Co , Detroit, Mich

This visiting list is again on our table, and we had hoped to see some revision The dose tables are given only in the old fashion and on page 11 a table for conversion is given which is useless for practical purposes As the new Pharmacopeia requires the metric or decimal system it will be seen that the list fails in that particular

Outlines of Obstetrics, a Syllabus of Lectures Delivered at the Long Island College Hospital By Charles Jewett, A M , M D Edited by Harold F Jewett, M D Philadelphia W B Saunders 1894 Price, $2 00

This book is a rather elaborate syllabus of the author's course of lectures on obstetrics, and will be found useful alike to students and teachers

Exercises for Pulmonary Invalids By Charles Denison, A M , M D Professor of Diseases of Chest and of Climatology, University of Denver Denver Chain & Hardy 1893

This is an essay of twenty-six 16 mo *pages* It was read by the author before the Medico-Climatological Congress of World's Fair, and printed according to a resolution of the same It contains elementary instruction on pulmonary gymnastics, with diagrammatic illustrations

Messrs Bailey & Fairchild, announce for next month a book by Dr L Duncan Bulkley, on "Syphilis in the Innocent" The work will be complete in about 350 pages, and is the enlargement of an essay which was awarded the Alvarenga Prize in 1891, and printed in the Journal of November 11

Chemistry and Physics, a Manual for Students and Practitioners By Joseph Struthers, Ph B , D W Ward Ph B and Charles H Willmarth, M D Edited by Bern B Gallaudet, M D , Demonstrator of Anatomy, College of Physicians and Surgeons, New York Philadelphia Lea Brothers & Co No date

This is one of the best and most complete of the "Students Quiz Series," issued by this well-known house It is an excellent reference book for practitioners, desiring to refresh their knowledge of chemistry, not less than for the student or young graduate preparing for examination

Essentials of Minor Surgery, Bandaging and Venereal Disease Prepared especially for students of medicine, by Edward Martin A M , M D , etc Second edition, 78 illustrations Philadelphia W B Saunders 1893 Price, $1 00

This book is one of the "Saunders Question Compends," and contains much useful information

Climates of the United States In colors Popular edition of Denison's Charts, with Additions By Charles Denison, A M , M D , Professor of Diseases of the Chest and of Climatology, University of Denver Chicago The W T Keener Company 1893 Price, $1 00

This is a very handy series of maps and tables, based on Government statistics and surveys As a reference work its place could not well be supplied

Diseases of the Skin, a Manual for Students and Practitioners By C C Ransom M D , Assistant Dermatologist Vanderbilt Clinic Philadelphia Lea Brothers & Co No date

This is one of the "Students' Quiz Series," and for those desiring to use "ponies" will be found useful The formulæ at the end of the book are written in the old system of weights and measures

Outline of Physical Diagnosis of the Thorax By Arthur M Corwin, A M M D Demonstrator of Physical Diagnosis in Rush Medical College Chicago The W T Keener Company 1893 Price, $1 00

This consists in a series of tabular statements of the subject of physical diagnosis It is intended for the use of students, and by them will doubtless be appreciated

NECROLOGY

Dr G N Worley, Williamsport, Md , November 6

Dr C A Loose of Peabody, Kan , November 6

Dr Charles L Reed, at LaCrosse, Wis , November 5

Dr Geo N Duzan, at Indianapolis, Ind , November 6

Dr E E Williams of Reedsburg, Wis , died at Janesville, November 4

Dr Thomas Cuddeback of Big Hat, N Y , November 8 He was graduated at the Medical Department of Yale College, 1847

Dr Barrack Offutt of Rockville, Md , died suddenly of heart disease at his home in Potomac District, in the fifty-eighth year of his age

Dr Samuel Rowell, 72 years old, of Jersey City, was found dead in bed November 4 Heart disease is supposed to have been the cause of death

Dr Morton Robinson died at Newark, N J , aged 69 He was born in Wakefield, R I , and graduated from the Metropolitan College, New York, in 1856

Dr H D Lachenour was found dead on a couch in his room November 6, at Easton, Pa Heart disease was the fatal ailment The deceased was 55 years old

Dr R B Jessup, Sr , one of the best-known physicians and surgeons of the State, died November 9, at Vincennes, Ind Dr Jessup was a member of the late Gov Hovey's staff He leaves a large estate

Dr Stephen Crosby Martin of Brookline died November 5 at the age of 33 He was a son of the late Dr Henry A Martin of Roxbury, and was a graduate of the Harvard Medical School, class of 1874

Dr John Magoffin, one of the oldest physicians in St Louis, died November 3, at Kirkwood, aged 74 years Dr Magoffin had resided in St Louis since 1854 and at one time had the largest practice in the city Of late years he had confined himself more to his office, but was a hard worker up to about five weeks ago, when he suffered a stroke of paralysis

Dr James Belvin, formerly of Virginia died in Belgium November 4 He was a graduate of the Medical College of Virginia and was a surgeon in the Confederate States Navy After the war he went to Paris, where he practiced his profession with success He was, however, forced by ill health to give up his practice and was engaged as the private and family physician for the Duke of Durham, and was traveling with the Duke when the latter married some time ago in Florida

Dr Chauncey M Hulbert, one of the oldest physicians of Barnstable County, died suddenly at his home in South Dennis, Mass , November 6 Dr Hulbert was born in East Sheldon, Vt , in 1818, was a student with Dr Horace Easton, Governor of Vermont, and graduated at Woodstock, Vt , in 1844 He came to South Dennis in 1852, where he has since practiced He has been President of the Barnstable County District Medical Society, and for the past eighteen years its Treasurer

Dr Charles Wesley Stanley, who died in New York city on the 26th ult , was born in Conway, N H , on May 28, 1828 He received his early education at the Oneida Institute, and was graduated in 1866 from the Medical Department of the University of New York In 1870 he removed to Chicago, where for over twenty years he was actively engaged in the practice of his profession Dr Stanley was quiet and retiring in disposition, and a devoted student As a physician he was capable and sympathetic, and by his kindly nature he endeared himself to all with whom he came in contact. He was married in 1869 to Miss Harriet Armstrong, who survives him A L G

Dr Abraham Clifford Wolf Beecher, who was stricken with apoplexy in the Masonic Temple, died November 7

Dr Beecher was born in Bainbridge, Lancaster County, March 26, 1859 He was the son of Jacob F Beecher, for a number of years a wholesale dry goods merchant of this city He removed to Philadelphia with his parents in 1852, and after studying in the public schools entered the Philadelphia College of Pharmacy, but later abandoned the study of pharmacy for that of medicine graduating from Jefferson College in 1867 For two years thereafter he was resident physician at the Philadelphia Hospital, and later acted as assistant to the late Professors Wallace and Meigs at Jefferson Medical College, where he also became Assistant Demonstrator of Anatomy, holding the latter position for a number of years About four years ago he resigned, devoting himself entirely to his private practice

Dr Charles Frederick Crehore died at Newton Lower Falls, Mass , November 8, aged 65 years He was known throughout the State as a philanthropist, and was one of the leading citizens of Newton, having been engaged in manufacturing for over thirty years He was graduated from Harvard Medical School in 1854, and practiced his profession till 1865, serving through the war as surgeon Since 1865 he devoted his attention to the Crehore Press-Board Works, succeeding his father Dr Crehore was regarded with respect and veneration by the mill hands employed by him His conduct toward them was always marked by the utmost generosity It was his practice to pension all the old laborers in his employ who were unable to support themselves He was a profound student of social questions and of medical science Some of his papers on election methods and microscopic analysis of germs were considered especially valuable

Dr David Judkins for over a half century a physician at Cincinnati, died November 12 He was in his 76th year and until a year ago seemed hale and hearty He then met with an accident which precipitated the end He fell down on a slippery staircase and injured the back of his head. He apparently recovered but not for long The injury continued to reappear in the form of sleeplessness until the fatigue began to prey on his constitution He was attacked by periods of extreme weakness, and only the other day fainted while on the streets After this attack he was confined to his room Some days since it became apparent he would not recover and his relatives were fully prepared for the end He had been a Trustee of Cincinnati Hospital since it was built, in 1867 He was graduated at Medical College of Ohio in 1842

Prof Hermann A Hagen —Prof Hermann A Hagen of Harvard College, the famous entomologist, died at Cambridge, Mass , November 9

Hermann August Hagen was born in Konigsberg, Prussia, May 30, 1817 For the last two hundred and fifty years some ancestor of his has been connected with the University of Konigsberg Young Hagen was graduated from the university and received his medical degree in 1840 Later he studied also in Berlin, Vienna and Paris He returned to Konigsberg and for three years was First Assistant at the surgical hospital From 1863 to 1867 he was Vice-President of the City Council and member of the School Board Meanwhile he had been studying entomology, and was invited by Louis Agassiz to come to Cambridge as an assistant in entomology at the Museum of Comparative Zoology In 1870 he was made professor of that science at Harvard He was a Fellow of the American Association for the Advancement of Science and other scientific societies His publications include some four hundred articles As an entomologist Hagen was said to rank first in America

HOW SHALL OUR LEPERS BE CARED FOR?

ABSTRACT

Read before the World s Public Health Congress, October, 1893

BY BENJAMIN LEE, A M, M D Ph D

SECRETARY OF THE STATE BOARD OF HEALTH OF PENNSYLVANIA

The State Board of Health of Pennsylvania and the Board of Health of the City of Philadelphia have had some unpleasant experiences with lepers which have led both of these bodies to appeal to the general government to establish a colony or colonies, where these unfortunates might be provided with the comforts of home and medical care and nursing and, at the same time might cease to be a horrid menace to the health of those with whom they were thrown in close contact In order to arrive at a somewhat definite opinion as to, first, the need for the adoption of such a measure, and secondly, the general drift of opinion on the part of those who had given the subject thoughtful attention, in December, 1891, I addressed circular letters of inquiry to the Secretaries of all State and Provincial Boards of Health in the United States and Canada, and to prominent dermatologists

Replies to those inquiries have been received in twenty-three instances

They indicate, briefly, that cases of the disease have been recognized and made the subject of official report in seventeen States and Provinces

In ten States or Provinces cases exist at the present time under the observation of the authorities, namely, New Brunswick, twenty-two cases, British Columbia, seven cases, New York, six cases, Pennsylvania, four cases, Illinois two cases, Iowa, one case, Minnesota, seven cases, Wisconsin, four cases, Louisiana, forty cases, California, twenty four cases, making in all 117 cases

At the well-known lazaretto at Tracadio in the Province of New Brunswick, provision is made for the comfort, care and treatment of these unhappy beings in a manner in harmony with the dictates of humanity and the requirements of modern science, while, at the same time, they cease to jeopardize the health and happiness of others The United States has only gone so far as to make the affection quarantinable at the sea coast and to order those found suffering from it on arriving vessels to be at once returned to the ports from which they came In the different States of the Union, the widest diversity prevails both in theory and practice The only place in which segregation is practiced and at the same time humane provision is made for the shelter, maintenance, medical attendance and nursing care of lepers, is the city of Philadelphia The manner in which the county authorities who have the care of the other case in Pennsylvania, discharge that duty is by no means in keeping with the dictates of humanity or the laws of sanitation

While their numbers are few, no little rural community, very few States, even—feel justified in going to the expense of establishing a lazar house or colony Is it wise to wait until State after State finds itself compelled by their increasing numbers to take this step, or is it not rather the duty of the central government to gather them all into one properly supervised community where they can have the companionship of their fellows, the comforts of a thoroughly furnished home, and the advantages of the best medical and surgical skill?

Such is the distinctly expressed opinion of nineteen of the twenty one eminent dermatologists who favored me with replies to my circular of inquiry

In conclusion, I desire to say that in determining the importance of this question and the necessity for governmental interference, the numerical method is entirely misleading One case of leprosy outweighs a hundred of any other disease If there were but ten lepers in the land instead of more than ten times ten, it would be equally the duty of Congress to initiate measures to prevent if possible, a single addition to the horribly afflicted company

CORRESPONDENCE

Biography of McDowell

New York, Nov 8, 1893

To the Editor —On page 710 of the Journal for Nov 4, 1893, Dr Thomas Hubbard states that copies of the life of Ephraim McDowell were not forthcoming to subscribers in Toledo About two years ago I paid $5 00 in advance for a copy of the work in question and have not as yet received the book The publishers disclaimed any knowledge of my subscription a year ago I took a charitable view of the matter and supposing that a woman's business methods might accidentally have been at fault, I decided to charge up the $5 00 to loss account Very truly yours,

Rob't T Morris

ASSOCIATION NEWS

Change of Date of Meeting—Official Notice —In order to enable the State Medical Societies to send instructions as to their action in the matter referred to them by the American Medical Association at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the Association at San Francisco has been changed from the first Tuesday in May to the first Tuesday in June, 1894

William B Atkinson, Permanent Secretary
James F Hibberd, President-Elect

SOCIETY NEWS

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

Augustin H Goelet, M D, President

First Day—September 12—Morning Session

The meeting was called to order at 10 15 a m by the President

The first order of business was discussion and vote upon the amendment to the constitution, that Article III shall read "The members of this Association shall consist of Ordinary Fellows, Honorary Fellows and Corresponding Fellows, who shall *either* be practitioners of medicine in good standing, or *electrical experts*,"—resulting in the adoption of the amendment

Upon motion of Dr W J Herdman of Ann Arbor, the article defining the privileges of Associate Fellows was amended to read "They shall enjoy all the privileges of Ordinary Fellows, excepting to vote or hold office, but shall not be required to pay fees or dues"

The following persons were then elected members of the Association as Ordinary Fellows

Dr H D Lawhead, Woodland Yolo County, Cal, Dr Frank P Norbury, Jacksonville, Ill, Dr A Brothers, 162 Madison Street, New York, N Y, Dr A Palmer Dudley, 640 Madison Avenue, New York, N Y, Dr N W Webber, Detroit, Mich, Dr Homer C Bennett, 8 Boone Block, Lima, Ohio, Dr George L Laforest, 274 St Denis Street, Montreal Canada, Dr Wm S Gotheil, 25 W 53d Street, New York N Y, Dr M M Weil, 125 E 76th Street, New York, N Y, Dr Fred H Morse, 74 Boylston Street, Boston, Mass, Dr

Wm F Waugh, 1725 Arch Street, Philadelphia, Pa , Dr Flynn S Hayes, Venetian Building, Chicago, Ill , Dr Horatio R Wood, Chicago, Ill , Dr Elliot H Woolsey, San Francisco, Cal , Dr D R Brower, Chicago, Ill

ASSOCIATE FELLOWS

Mr A E Kennelly, Chief Electrician of the Edison Laboratory, Orange N J , Mr J J Carty, Vice President N Y Electric Society, N Y , Mr H Newman Lawrence, Member Institute Electrical Engineers, 5 Guilford Road, S Lambeth, London, Eng , S W , Mr M J Jenks, Electrical Engineer, 44 Broad Street, New York

HONORARY FELLOWS

Prof Edwin J Houston, 1809 Spring Garden Street, Philadelphia, Pa , Dr Thomas Keith, London, England, Mr A E Dolbear, President, Tufts' College, Boston, Mass , Prof H Carhart, Ann Arbor, Mich

PRESIDENT AUGUSTIN H GOELET, M D , read his address on

INFLUENCES GOVERNING THE PROGRESS OF ELECTRO-THERAPEUTICS

Fellow-Members of the American Electro Therapeutic Association —Last year, in a spirit of humor, this Association was referred to as a vigorous infant True, its growth has been somewhat astonishing, but when it is considered that it boasts of three parents its vigor is readily explained No doubt each member of this Association feels so keen an interest in its welfare as to regard it in the nature of a tender offspring, and while it may have started out with but three, it now has many parents who will continue to nurture it until it develops and prospers beyond their most sanguine expectations

In the beginning, it was said of this infant, that there was no place for it, that it could never prosper, but would always be feeble, and it was predicted that it would die young Yes, even before the completion of its first dentition

If its present state of healthfulness, and the fact that it has already passed the period of adolescence, may be accepted as evidence upon which to base a prognosis, it is destined to a long life of great usefulness and a ripe old age

Heretofore our meetings have been held in New York and Philadelphia But we have outgrown those cities, and for this reason have come to Chicago

THE NEED OF AN ELECTRO THERAPEUTIC SOCIETY

The inauguration of this Association marks an event in medicine quite as important as any that has occurred within the present century, since it succeeded in establishing a recognized position for an important and long neglected branch of therapeutics The success of this Association is sufficient evidence that it was needed Its future usefulness can be readily foreseen, not only by those directly interested in electro-therapeutics, but also by those interested in scientific investigation

Many of you have realized the utter futility of presenting papers upon electrical subjects, particularly technical papers, before other medical societies, where the spirit of true discussion is lost in an unreasonable opposition to everything pertaining to electricity; or by feeble objections, devoid of both argument and reason This teaches nothing and profits no one Opposition of a reasonable nature is wholesome and acts as a stimulus to renewed investigation but flat denials or personal contradictions on the part of those who know nothing of the subject, made apparently for the purpose of obstructing progress in scientific research, will never succeed in settling a disputed point, nor add one iota towards that end

This has its origin in the difficulties besetting the general profession The demands upon their time, the avalanche of new drugs requiring study, perhaps to be soon discarded, so engross as to make impossible, research and trial or somewhat older electricity, which to many conveys but a name

Here we meet upon common ground We all understand electricity, or hope we do, and those who enter into the discussions do so with an earnest desire to bring out all facts and ascertain the truth The avowed purpose of this Association is the development of electro-therapeutics, and a spirit of true investigation pervades our proceedings

The work so far has been very creditable, in spite of its being a young organization, embracing an entirely new field, about which there has been necessarily much uncertainty We must fully realize, however, what we are endeavoring to do We are building up an entirely new system of therapeutics, and our work must be of such character as to bear criticism The mere fact that the results have been good will not suffice A rational explanation for the methods adopted must be given In other words, our methods must bear investigation, and must bear the stamp of scientific reasoning Our results may be doubted, but our methods, based upon scientific laws, can not be questioned There has been too much empiricism about the older therapeutics, which still exists to some extent, but this would be no justification for anything of a similar nature in electro-therapeutics Unless a very decided improvement upon older methods be demonstrated, there will be no reason for its preferment Enthusiasm, though justifiable, should never lead to statements which can not be substantiated Our assertions, on the contrary, must always be permeated with truth, which is beyond cavil

We have many things to contend with in introducing electro therapeutics to the profession, chief of which is an opposition to every new inroad upon old and established methods

THE OPPOSITION TO ELECTRO-THERAPEUTICS

The progress of electro therapeutics is retarded by a want of appreciation by the profession, born of unfamiliarity with electro physics and electro-physiology, and is in a great measure attributable to restricted medical education This, fortunately, is being gradually overcome, but progress must necessarily be slow until medical colleges can be impressed with the importance of including this branch in their regular curricula Some schools have shown a progressive spirit and are endeavoring to meet the demand for a more thorough knowledge of the requirements for the successful application of electro-therapeutics By far the larger number of medical colleges, however, appear to be blind to its importance and to their own interests Occasionally, yet reluctantly, the attempt is made to impart some information concerning electro therapeutics, but neither the instructor nor the student has any knowledge of electro physics and the result is an ignominious failure

Electro therapeutics can not be appreciated, or successfully applied, without a thorough practical knowledge of the fundamental principles governing the action of electricity

Restricted medical education has done more than anything else to retard the progress of electro therapeutics, because the practicing physician, who feels inclined to adopt it, knows nothing of the physics of the subject, and usually goes about learning it in the wrong way Instead of making himself familiar with the groundwork or learning the technique, he commences by purchasing a battery and trying it on a patient If he chance to succeed at first, he will be encouraged to continue, and may eventually become impressed with the importance of learning something of the mysterious agent This is learning electricity backwards If he fails, he regards it as worthless, casts it aside, and never loses an opportunity to decry it on every occasion You, my hearers, know this, but the outside world does not

The medical graduate of the future may be more fortunate He may be taught electro physics and electro physiology, and will thus be able to appreciate electro-therapeutics and employ it intelligently If all practicing physicians to day possessed this knowledge, they would—every one of them—use electricity in some form in their every-day practice, instead of ignoring its advantages and allowing their patients to go to the specialist for this form of treatment

Another thing which militates against its more universal adoption by the medical profession, is that the application of electricity is regarded as complicated and troublesome Such agents as antipyrin, phenacetin, viburnum and ichthyol or any of the new drugs, are employed by preference, because their administration involves no particular trouble or inconvenience to the attendant, and requires no special knowledge or training No intelligent reason can be given for their preferment, nor can their action be explained They are accepted, without question, upon the statements of the manufacturers, as put forth in the prospectus which announces the drug What is to be said of one who objects to the use of electricity, when furnished a rational explanation of its action and abundant evidence in proof of its value, when he considers his own convenience rather than the interests of his patients?

Much of the prevalent opposition to modern electro-therapeutics is the result of the imperfections of the past methods, which certainly were unscientific Many who have ignored it, or who have discarded it after having employed it, according to methods in vogue ten years ago, are not cognizant of the advances since made Consequently it is frequently referred to, in a patronizing way, as a palliative measure Electro-therapeutics of to day present a wide difference by comparison with electro-therapeutics of even five years ago The advance in this branch of therapeutics has been truly remarkable, thanks to some indefatigable workers among us, as well as those now so well known in France, the land which gave birth to the present scientific application of electricity to the cure of disease and the alleviation of human suffering Until within quite a recent period, any one who ventured to employ this agent in the treatment of disease or expressed confidence in its capabilities was regarded as a charlatan Now, the electro therapeutist occupies an exalted position in the eyes of all, save a few opponents who can see nothing good in anything they do not understand These would be obstructionists are, however, rapidly decreasing in number, their own demise being accomplished by their very vigorous denunciation of the value of electricity, notwithstanding evidence to the contrary

To deny the value of electricity because of failures which may be due to a misconception of its proper indication and application, or where it may be supposed, with a reasonable degree of certainty that the apparatus was faulty or the technique was imperfect, is equivalent to condemning a drug because one sample of it is found to be inactive, or because it failed when unwisely used where it could not be expected to produce an effect

To say, as some do, that its merit can not be conceded, because the nature of its action can not be comprehended, is an acknowledgment of mental inferiority not to be expected of a medical man in this progressive and enlightened age

If electricity has proved useful in the hands of those seeking to favor the progress of medical science, and this has been repeatedly verified, there is certainly reason for its claim upon the attention of the profession If too much has been claimed for it, it is but a repetition of what follows in the wake of every new idea in medicine After all, a better knowledge and understanding, resulting from subsequent investigation, may prove some of these claims not to have been exaggerated If we oppose every new idea and deny its utility there would be no progress, and we would cease to be scientists

We must contend with this opposition for the present Eventually it will be overcome, but much depends upon the character of the work done by this Association, and upon the personality of its members

THE OPPONENTS OF ELECTRICITY

The opponents of electricity may be divided into three classes, viz those who openly oppose it, those who profess not to believe in it but use it only because their patients desire it and those who believe it capable of curing every ill flesh is heir to

Of these, its avowed opponents are, by far, its feeblest enemies Their denunciation is an open confession of ignorance and is evidence of narrow mindedness which injures them more than it injures the agent they so vainly endeavor to suppress

Those of the second class are very dangerous enemies They use electricity though professing no faith in it, only to please their patients They claim to understand its application in all its details Its use in their hands, though expertly employed, (?) is destined to prove to the patient its utter worthlessness as a therapeutic measure If, by chance, the patient is benefited, it is attributed to some other agent coincidently employed No cognizance is taken of the actual effect produced, and if a good effect is observed it is carefully buried, care being taken that no record of it leaks out, for their interests for reasons best known to themselves, are against electricity, and it would not do to admit anything in its favor Doubtless every one of you are familiar with this class

Those of the third class are, I believe, the greatest enemies of this agent They employ it in every condition of disease, regardless of its applicability Electricity to them is a magic wand which, without a why or a wherefore, brushes aside all obstacles in the shape of disease They appear to believe electricity, no matter how employed, a power that disease can not resist That in other words, it is only necessary to inject it into the system as a drug is injected under the skin, and all morbid processes are destroyed They show an entire disregard for the pathologic condition or the cause operating to maintain it, trusting to the remedy to supply the place of brains Their views carry them to extremes, and hold them up to the ridicule of sensible practitioners This class must be suppressed, and it devolves upon this Association to accomplish it

To defeat the second class is a more difficult matter It can be done only by educating the masses to an appreciation of the advantages of electricity They can then judge for themselves where to place the credit of a cure, and they will be able to decide who is competent to administer this agent properly

We need not concern ourselves with the first class They will eventually accomplish their own destruction

"Quem deus vult perdere, prius dementat"

THE WORK OF THE ASSOCIATION

This Association from its inception has shown a progressive spirit At the first meeting, two important committees were appointed to investigate scientific questions At the second meeting, these were increased by four, so that there are now six which report at this meeting The result of this work has not been altogether satisfactory, owing to some, as yet, insurmountable obstacles Eventually the work of these committees will revert greatly to the credit of the Association Every member appointed should throw his whole soul into the work for the coming year, and your presiding officer will be thankful for any suggestions which will aid him in appointing those best qualified, that the committees may be composed of real workers who have an interest in the work

The association with us of other scientists from the electrical world is a step in the right direction It will have an important bearing upon the future of this Association It tends to broaden the scope of our proceedings, and must certainly be productive of mutual benefit

The fixed discussions which were inaugurated at our last meeting have been the means of bringing out many important points and removing many doubts and uncertainties These discussions have been made a feature of this meeting also, and I hope they will be continued each year Those appointed for this meeting involve questions of the greatest importance, and are well worth the consideration of the profession at large, as well as of this body The Executive Council, to whom the credit of selecting these subjects is due, are to be congratulated upon the selections They have foreseen that the general profession should understand what views are entertained by those most prominent in electro therapeutics, upon subjects which have been under dispute, and have shown wisdom in their choice, both of the subjects and those appointed to discuss them Let this good work continue

I would direct particular attention to the discussion upon 'The Possibilities of Electricity in the Treatment of Fibroid Growths," arranged for this meeting The question will probably not be entirely disposed of in this discussion, but the latest views of those most prominently identified with it will be brought out, and the conclusions up to date will be reached

The other discussion, "The Influence of Frequency of Interruptions and the Character of Induced Current Waves upon Physiological Effect," is of the greatest importance in the therapeutic administration of the induced current, and its selection for discussion shows that this Association has a conception of the scientific requirements necessary for the most satisfactory results in employing this agent The fact that these points have not been considered before in a comprehensive manner shows, likewise, that past methods have, to a great extent, been imperfect, and that realizing this we desire to make them more perfect In this manner, important advances in electro therapeutic methods are suggested and worked out

Within the past five years, scarcely a year has elapsed without the development of some new and important feature, involving the application of this agent in some one of its forms As an instance of some of these advances, the metallic or interstitial electrolysis popularized by Gautier, and the development of the alternating current by d'Arsonval, so it may be utilized satisfactorily for medical purposes, stand out conspicuously

Metallic electrolysis, I regard as one of the most important additions to electro therapeutics, and so expressed myself in a brief paper upon this subject which was presented at the June meeting of the New York Electro-Therapeutic Society In this paper I drew attention particularly to the advantages of cupric electrolysis, and outlined many uses for zinc employed in the same manner The effect produced by zinc electrolysis, as enumerated in the paper referred to, shows that it possesses distinct features which make it a valuable addition to our therapeutic resources As contrasted with cupric electrolysis it possesses advantages which render it equally valuable

For instance, in gynecological work the local action of the oxychlorid of zinc set free as a result of its decomposition by the current, when in contact with the tissues, may be readily appreciated The local action of the zinc chlorid obtained in this manner is rendered more valuable because of the possibility of controlling the degree of action, as well as the penetration, by adjusting the current strength and duration of the application, thus varying the extent of chemic action Additional advantage accrues from the fact that nothing is left behind to continue the action or provoke irritation, as is the case when a solution or pencil containing chlorid of zinc is employed It was not recommended to be employed in a manner to produce extensive destruction of tissue, and for this reason a moderate current strength was advised Thus it is possible to obtain the characteristic local action of the zinc chlorid with only a superficial caustic effect, and it is serviceable where the softening effect of the zinc is desired, and where the effect of the positive pole is demanded, or where the negative is contra-indicated Another advantage, which appears to me sufficient to commend it, is the very moderate current strength needed to produce the local caustic action required, as compared with that necessary when the current is employed with non-attackable electrodes

The softening effect produced by zinc electrolysis has been found useful likewise in keloids and fibroid growths, employed by means of puncture where the negative pole is contra indicated In some instances it was noted that the beneficial effect was greatly in excess of that attainable by simple electro chemic decomposition of the tissues

The experiments of d'Arsonval with the alternating current lead us to believe that, in thus revivifying, by improving and perfecting the necessary apparatus for its generation, an old and discarded form of the induced current, he has added another to our already numerous electro-therapeutic resources Experiments show that this current is not only more easily borne, but is more soothing than the current from the ordinary induction coil, owing chiefly to the character of the wave produced

The important improvements that have been made within the past two years in the induction apparatus for obtaining the interrupted induced current, otherwise known as the faradic current deserves mention also These improvements, involving an increased frequency of interruptions and an increased electro-motive force, render this current quite equal in point of value to the improved alternating current and quite as easily borne

It will thus be seen that electro-therapeutics is continually progressing, and every year we are approaching nearer to a more exact science and perfect methods

Though concerted effort for electro therapeutics is still young, we already exert a decided influence upon the views prevailing in medicine To maintain this we must resolutely continue the battle We number among us men who command the respect of the scientific world, but we must ever seek stronger reenforcements To that end, I would suggest, as an amendment to our constitution, that hereafter every candidate be required to present a paper which shall be submitted to the Executive Council previous to the annual meeting They will thus pass upon his qualifications for membership before his name is proposed here to be voted upon

If we would grow and prosper we must show continuous improvement Let our motto, then be, progress, and let us every year take an important step in advance

By conjoint efforts we will bring electro-therapeutics to that scientific plane which will make its most strenuous opponents our most cordial coadjutors We will then reap the reward, the satisfaction of having done our duty, the best, the noblest, the sweetest satisfaction which can be given our profession

REPORTS OF COMMITTEES ON SCIENTIFIC QUESTIONS

On Standard Coils—DR W J MORTON, the Chairman, said that the subject was so large that it seemed premature to make a report on what should constitute a standard coil The physical and physiologic effects are bringing out new points each month Such a coil can be manufactured but we do not yet know all the effects which are desired from them On motion, the Committee was continued

On Standard Meters—DR MARGARET A CLEAVES of New York, Chairman of the Committee, read the report

Mr President and Fellows of the Association —Your Committee on standard meters beg leave to submit the following report

Your Chairman is personally indebted to Mr W J Jenks, electrical expert of the Legal Department of the General Electric Co of New York City, and Fellow of this Association under the amendment to the constitution and to his technical assistant, Mr Edwin W Hammer of New York City, for exceedingly valuable help in making the tests and this report

Mr Jenks was invited by the President to cooperate with your Chairman in this work by request of the latter

The test has been made with the greatest care and every effort was put forth to make it one of absolute accuracy

It was necessary, in examining the instruments submitted, preparatory to a test, that the requirements of a thoroughly good meter be kept in mind These requirements, as suggested by the experience of many, might be summed up as follows

1 A good meter should have a clear, legible scale, fairly uniform over the range, and not crowded at different points The question as to whether it is desirable or necessary to have a scale divided into fractions of a milliampère, and whether it is an advantage to have a low and high scale on one instrument, is one which the Committee has not passed upon

2 The scale should be so clear that the operator can read it, while working on his subject

3 The internal resistance should be low

4 There should be no tendency to overheat with the strongest current employed

5 A shunt is always a disadvantage, when employed with a disregard, accidental or unavoidable, to the possibility of its heating and thereby changing its resistance A shunt, per se, is not fatal to the accuracy of an instrument, but it is best to avoid them except in those higher priced instruments, in which the best talent and most expensive materials have been applied to the satisfactory combination of conditions

6 The instrument should be capable of indicating in all positions This is possible in only those instruments not of the galvanometer type, and even then a change from the most favorable position is at the expense of delicacy of indication It is an easy matter to adjust a mirror so as to compensate for this shortcoming

7 Any instrument whose indications depend directly upon the local magnetic force is objectionable, for the reason that its indications are liable to be affected by iron in the vicinity or outside magnetic influences This is true of all instruments of the galvanometer type, which is that type in which the current to be measured passes, not through the armature coil, but around the electro magnet which influences the position of a magnetic needle suspended within its field of force

8 The suspension system should be delicate and sensitive, and at the same time be unlikely of derangement in use or shipment

9 It is an advantage for the meter to indicate with the current passing in either direction However, this is a consideration which should not take precedence at the expense of accuracy It is possible, knowing the characteristics of a meter in this respect, to so connect it up in circuit with the other apparatus as to always have the current pass in the proper direction

10 A meter should be easily carried about, and

11 It should not be readily broken or put out of order

(*To be continued*)

The State Medical Society of Maryland will hold its semi annual meeting at Annapolis, Md , Tuesday and Wednesday, Nov 21 and 22 There is a prospect of a full and interesting meeting

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At a Meeting held for the purpose at the University of Maryland, Baltimore, the Medical Society of the University of Maryland was organized with the following officers President, Dr J J Chisolm, Vice-President, Dr C W Mitchell, Secretary, Dr W B Canfield, Executive Committee, Drs J E Michael, W B Platt and J M Hundley The Society will meet on the first Tuesday of each month,

and will be composed of the Faculty, Adjunct Faculty, members of the teaching and hospital staffs and graduates of the University WILLIAM B CANFIELD, M D,
Secretary

Fox River Valley Medical Association —The fifty second semi-annual meeting of the Fox River Valley Medical Association was held in Aurora, Ill, November 7 A feature of the program was a discussion of therapeutics by Dr Charles F Hawley of Chicago, and Dr B F Bill of Genoa Junction, Wis Following officers were elected President, Dr W A Nason of Algonquin, Vice President, Dr R F Bennett of Elgin, Secretary and Treasurer, Dr H L Pratt of Elgin The program concluded with a banquet at Hotel Bishop

MISCELLANY

Mr Gladstone's Physician —Dr William Henry Broadbent has been appointed as physician to Premier Gladstone, vice Sir Andrew Clark, deceased

Gift to Yale Medical School —The Yale Medical School will receive $25,000 by the will of the widow of Dr E Hart of Hartford

Dr J H Jenkins, *formerly A A Surgeon in the United States Army, stationed in Arizona, was run down by a* train at Hazelton, Penn, October 29, *and fatally injured*

Harper Hospital, Detroit, celebrated the opening of the Swain Home and Duffield Memorial Cottage, to be used respectively as a home and training school for nurses, November 9

The Chicago Clinical Review —This interesting monthly has inaugurated a new department in the current number That is a list of titles of the original articles and leading editorials that have appeared in the medical periodicals of the month

Boston City Hospital —This hospital secured a medal at the World's Fair for the excellence of its exhibit The exhibit consisted of plans, photographs and other objects of interest in connection with the hospital service

Dr W A Brown was elected Demonstrator of Anatomy by the Faculty of Ensworth Medical College, St Joseph, Mo, to fill the vacancy caused by the resignation of Dr W H Wilson, who has been appointed Assistant Surgeon United States Army

Irish Cholera Victims —Archbishop Cleary of Kingston, will cause the erection of a statue on a mound in the hospital grounds in memory of the Irish immigrants who died at Kingston, Canada, during the cholera plague, 1847, to the number of over 1,000, and many of whose remains rest near and under the mound The statue will be a life size picture of an angel of pure Carrara marble, cut in Italy from a solid block three tons in weight It will cost $1,200

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For instance, in gynecological work the local action of the oxychlorid of zinc set free as a result of its decomposition by the current, when in contact with the tissues, may be readily appreciated The local action of the zinc chlorid obtained in this manner is rendered more valuable because of the possibility of controlling the degree of action, as well as the penetration, by adjusting the current strength and duration of the application, thus varying the extent of chemic action Additional advantage accrues from the fact that nothing is left behind to continue the action or provoke irritation, as is the case when a solution or pencil containing chlorid of zinc is employed It was not recommended to be employed in a manner to produce extensive destruction of tissue, and for this reason a moderate current strength was advised Thus it is possible to obtain the characteristic local action of the zinc chlorid with only a superficial caustic effect, and it is serviceable where the softening effect of the zinc is desired, and where the effect of the positive pole is demanded, or where the negative is contra-indicated Another advantage, which appears to me sufficient to commend it, is the very moderate current strength needed to produce the local caustic action required, as compared with that necessary when the current is employed with non-attackable electrodes

The softening effect produced by zinc electrolysis has been found useful likewise in keloids and fibroid growths, employed by means of puncture where the negative pole is contra indicated In some instances it was noted that the beneficial effect was greatly in excess of that attainable by simple electro chemic decomposition of the tissues

The experiments of d'Arsonval with the alternating current lead us to believe that, in thus revivifying, by improving and perfecting the necessary apparatus for its generation, an old and discarded form of the induced current, he has added another to our already numerous electro-therapeutic resources Experiments show that this current is not only more easily borne, but is more soothing than the current from the ordinary induction coil, owing chiefly to the character of the wave produced

The important improvements that have been made within the past two years in the induction apparatus for obtaining the interrupted induced current, otherwise known as the faradic current deserves mention also These improvements, involving an increased frequency of interruptions and an increased electro-motive force, render this current quite equal in point of value to the improved alternating current and quite as easily borne

It will thus be seen that electro-therapeutics is continually progressing, and every year we are approaching nearer to a more exact science and perfect methods

Though concerted effort for electro-therapeutics is still young, we already exert a decided influence upon the views prevailing in medicine To maintain this we must resolutely continue the battle We number among us men who command the respect of the scientific world, but we must ever seek stronger reënforcements To that end, I would suggest as an amendment to our constitution, that hereafter every candidate be required to present a paper which shall be submitted to the Executive Council previous to the annual meeting They will thus pass upon his qualifications for membership before his name is proposed here to be voted upon

If we would grow and prosper we must show continuous improvement Let our motto, then be, progress, and let us every year take an important step in advance

By conjoint efforts we will bring electro-therapeutics to that scientific plane which will make its most strenuous opponents our most cordial coadjutors We will then reap the reward, the satisfaction of having done our duty, the best, the noblest, the sweetest satisfaction which can be given our profession

REPORTS OF COMMITTEES ON SCIENTIFIC QUESTIONS

On Standard Coils —Dr W J Morton, the Chairman, said that the subject was so large that it seemed premature to make a report on what should constitute a standard coil The physical and physiologic effects are bringing out new points each month Such a coil can be manufactured but we do not yet know all the effects which are desired from them

On motion, the Committee was continued

On Standard Meters —Dr Margaret A Cleaves of New York, Chairman of the Committee, read the report

Mr President and Fellows of the Association —Your Committee on standard meters beg leave to submit the following report

Your Chairman is personally indebted to Mr W J Jenks, electrical expert of the Legal Department of the General Electric Co of New York City, and Fellow of this Association under the amendment to the constitution and to his technical assistant, Mr Edwin W Hammer of New York City, for exceedingly valuable help in making the tests and this report

Mr Jenks was invited by the President to cooperate with your Chairman in this work by request of the latter

The test has been made with the greatest care and every effort was put forth to make it one of absolute accuracy

It was necessary, in examining the instruments submitted, preparatory to a test, that the requirements of a thoroughly good meter be kept in mind These requirements, as suggested by the experience of many, might be summed up as follows

1 A good meter should have a clear, legible scale, fairly uniform over the range, and not crowded at different points The question as to whether it is desirable or necessary to have a scale divided into fractions of a milliampère, and whether it is an advantage to have a low and high scale on one instrument, is one which the Committee has not passed upon

2 The scale should be so clear that the operator can read it, while working on his subject

3 The internal resistance should be low

4 There should be no tendency to overheat with the strongest current employed

5 A shunt is always a disadvantage, when employed with a disregard, accidental or unavoidable, to the possibility of its heating and thereby changing its resistance A shunt, per se, is not fatal to the accuracy of an instrument, but it is best to avoid them except in those higher priced instruments, in which the best talent and most expensive materials have been applied to the satisfactory combination of conditions

6 The instrument should be capable of indicating in all positions This is possible in only those instruments not of the galvanometer type, and even then a change from the most favorable position is at the expense of delicacy of indication It is an easy matter to adjust a mirror so as to compensate for this shortcoming

7 Any instrument whose indications depend directly upon the local magnetic force is objectionable, for the reason that its indications are liable to be affected by iron in the vicinity or outside magnetic influences This is true of all instruments of the galvanometer type, which is that type in which the current to be measured passes, not through the armature coil, but around the electro-magnet which influences the position of a magnetic needle suspended within its field of force

8 The suspension system should be delicate and sensitive, and at the same time be unlikely of derangement in use or shipment

9 It is an advantage for the meter to indicate with the current passing in either direction However, this is a consideration which should not take precedence at the expense of accuracy It is possible, knowing the characteristics of a meter in this respect, to so connect it up in circuit with the other apparatus as to always have the current pass in the proper direction

10 A meter should be easily carried about, and

11 It should not be readily broken or put out of order

(*To be continued*)

The State Medical Society of Maryland will hold its semi annual meeting at Annapolis, Md , Tuesday and Wednesday, Nov 21 and 22 There is a prospect of a full and interesting meeting

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At a Meeting held for the purpose at the University of Maryland, Baltimore, the Medical Society of the University of Maryland was organized with the following officers President, Dr J J Chisolm, Vice-President, Dr C W Mitchell, Secretary, Dr W B Canfield, Executive Committee, Drs J E Michael, W B Platt and J M Hundley The Society will meet on the first Tuesday of each month,

and will be composed of the Faculty, Adjunct Faculty, members of the teaching and hospital staffs and graduates of the University WILLIAM B CANFIELD, M D,
Secretary

Fox River Valley Medical Association —The fifty second semi-annual meeting of the Fox River Valley Medical Association was held in Aurora, Ill, November 7 A feature of the program was a discussion of therapeutics by Dr Charles F Hawley of Chicago, and Dr B F Bill of Genoa Junction, Wis Following officers were elected President, Dr W A Nason of Algonquin, Vice President, Dr R F Bennett of Elgin, Secretary and Treasurer, Dr H L Pratt of Elgin The program concluded with a banquet at Hotel Bishop

MISCELLANY

Mr Gladstone's Physician —Dr William Henry Broadbent has been appointed as physician to Premier Gladstone, vice Sir Andrew Clark, deceased

Gift to Yale Medical School —The Yale Medical School will receive $25,000 by the will of the widow of Dr E Hart of Hartford

Dr J H Jenkins, formerly A A Surgeon in the United States Army, stationed in Arizona, was run down by a train at Hazelton, Penn, October 29, and fatally injured

Harper Hospital, Detroit, celebrated the opening of the Swain Home and Duffield Memorial Cottage, to be used respectively as a home and training school for nurses, November 9

The Chicago Clinical Review —This interesting monthly has inaugurated a new department in the current number That is a list of titles of the original articles and leading editorials that have appeared in the medical periodicals of the month

Boston City Hospital —This hospital secured a medal at the World's Fair for the excellence of its exhibit The exhibit consisted of plans, photographs and other objects of interest in connection with the hospital service

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Yellow Fever —The citizens of Brunswick, Ga , ask no more aid from the outside world, and formally withdrew their appeal November 1 The following is their touching statement

"To the Press and the Charitable People of Our Common Country Recognizing the fact that even charity, that divinest attribute of human character, at times reaches its limit, the Relief Committee of Brunswick is constrained through that great medium, the public press, to announce that with a month's provision on hand, and enough funds, carefully and judiciously expended, to meet our immediate wants, that it would be unkind to a generous people to receive further contributions which our actual necessities do not demand It would be unjust to accept a greater amount than could be used in the present emergency Times are hard, money scarce, and we desire no surplus left over Let the future take care of itself From all over this broad land our cry of distress has been answered, the charity of a Christian people has enabled us to care for our sick, to feed the hungry and bury our dead We could not ask more Words fail to express all we would wish to say to our countrymen, confined, as their generosity has been, by no lines, or sections, but the free-will offerings of the throbbing, sympathetic hearts of a great and noble people From East, West, North and South came the answer 'You shall not suffer ,' from the banker, the merchant, from the gilded homes of wealth, from the cottage, from the hands of matron and maid, from widow and orphan, came the response to our stricken people's appeal

To the press, which has so kindly aided us, without whose assistance our efforts would have been fruitless, the newspaper men who made our situation known day by day, to those faithful guardians of the sick—the physicians—without whose skill and attention our fair city would have been desolated, we tender our profoundest gratitude and thanks, sustained as we are, by the assurance that we have tried to do our duty throughout the trying ordeal through which we have passed and are passing and with abiding faith in the protecting care of Almighty God and an early cessation of the epidemic Whatever may be in transit, donated by the people of this country, will be gladly received We are faithfully yours

[Signed] T W Lamb, L C Bodet, Dr F Joerger J W Smith C P Goodyear, J E Dart, M J Colson, H A Wrench, Rev J A Thompson, Rev Father J Hennessy Rev Ed F Cook, William Anderson, S C Littlefield, W F Symons, Dr J A Butts

A vote of thanks was also passed to the New York *World* for sending its physician, Dr Bowen

THE PUBLIC SERVICES

Army Medical School Washington D C —Session of 1893–'94 Order of Duties Daily except Saturdays Sundays and holidays 9 A M to 12 M , Instruction in Pathological Laboratory 1 P M to 2 50 P M , Instruction in Chemical Laboratory 3 P M to 4 P M Lecture

Saturdays —9 30 A M to 10 30 A M at Hospital Corps School of Instruction Washington Barracks Practical Instruction in Litter and Ambulance Drill and First Aid 1 30 P M to 3 P M , in Riding Hall, Fort Myer Va Practical Instruction in Equitation

The lectures will be delivered as follows

Duties of Medical Officers, Wednesdays, except Nov 22, 1893, and Jan 24 1894

Military Surgery etc Thursdays throughout the course

Military Hygiene Fridays, except Feb 23, 1894

Military Medicine, Tuesdays Nov 7 and 14, Wednesday, Nov 22, 1893, and Jan 24 and Mondays, Jan 29, Feb 5 12 and 19, 1894

Auxiliary Courses—Bacteriology General Sternberg, Mondays to and including Jan 22 1894

Military Law, Major G B Davis Judge Advocate U S A Tuesdays in January 1894

Comparative Anatomy, etc , Captain J C Merrill, Medical Department U S A , Tuesdays in December 1893

Medical Jurisprudence, Dr Robert Fletcher, F R C S ,'England, Tuesdays in February 1894 (except the 27th) also Friday February 23

Parasites in Man Prof C W Stiles M D , Department of Agriculture, Tuesdays Nov 21 and 28, 1893

Due notice of any change of program will be posted on the bulletin board

WALTER REED
Capt and Asst Surgeon U S A ,
Secretary of the Faculty

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from November 4, 1893 to November 10 1893

Capt WILLIAM STEPHENSON, Asst Surgeon U S A is granted leave of absence for four months By direction of the Secretary of War

Major BLAIR D TAYLOR Surgeon, station is changed from the old post of Ft Bliss, Texas, to the new post of that name, and he will report in person to the commanding officer of the latter named post for duty

By direction of the Secretary of War the appointments of WILLIAM W QUINTON, THOMAS S BRATTON, DEANE C HOWARD, ALEXANDER S PORTER and WILLIAM H WILSON to be Assistant Surgeons with the rank of First Lieutenants, to rank from Oct 26 1893 are announced They will report in person without delay to the President of the Army Medical School in Washington, D C for the course of instruction prescribed in General Order No 78, A G O Sept 28, 1893

Capt FRANCIS J IVES Asst Surgeon is relieved from temporary duty with the medical section of the War Department Exhibit World's Columbian Exposition Chicago, Ill , and will return to his proper station Ft Sheridan Ill

First Lieut JOHN S KULP Asst Surgeon, now on duty at Columbus Bks Ohio will proceed to Jackson Park Chicago Ill and report in person to the commanding officer Camp Lamont, for temporary duty with the battalion of troops stationed there

PROMOTIONS

Capt EDWARD T COMEGYS, Asst Surgeon, to be Surgeon with the rank of Major Oct 26, 1893

First Lieut JAMES D GLENNAN Asst Surgeon, to be Asst Surgeon with the rank of Captain Oct 29 1893

First Lieut ALFRED E BRADLEY, Asst Surgeon, to be Asst Surgeon with the rank of Captain, Oct 29, 1893

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 11 1893

Surgeon WILLIAM MARTIN ordered before Retiring Board

P A Surgeon N J BLACKWOOD from Navy Yard, New York, and to Norfolk Hospital

P A Surgeon T C CRAIG ordered to Navy Yard New York

P A Surgeon E P STONE from Naval Hospital, Chelsea and to Marine Rendezvous Boston Mass

P A Surgeon G B WILSON from Marine Rendezvous Boston and to Naval Hospital Chelsea Mass

Medical Inspector B H KIDDER promoted to grade of Medical Director

P A Surgeon JAMES E GARDNER, promoted to grade of Surgeon

P A Surgeon MILLARD H CRAWFORD promoted to grade of Surgeon

Passed Assistant Surgeon Rush —Passed Assistant Surgeon Charles W Rush United States Navy (retired) died November 9 at Annapolis Md , after a lingering illness, of consumption Dr Rush married a daughter of Prof W W Fay of the Navy, at whose house he died He had been in bad health for a long time He was appointed from New York and was made Assistant Surgeon in July 1883 Last June, owing to ill health, he was put on the retired list after having served a year on leave His disease was contracted in the line of duty

LETTERS RECEIVED

(A) Antikamnia Chemical Co , St Louis Mo Andrews, Edmund Chicago, Ill Allport, Frank Minneapolis Minn Allen Marie E Philadelphia Pa , Atkins E C Colorado Springs Col **(B)** Beadles, Chas H , Lewistown Ill Brush E F Mt Vernon N Y Barck C , St Louis Mo , Bates & Morse Adv Agency New York City Banga H Chicago, Ill Bailey Fairchild & Co New York City Dr Bienfait Liege Belgium **(C)** Cameron D E , Toronto Canada Criley B H Dallas Center, Iowa Clark, E C San Francisco, Cal Castle Wilmot & Co Rochester N Y Chancellor E , St Louis, Mo Chain & Hardy, Denver Col Clum, F D Cheviot N Y **(D)** De Schweinitz, G E Philadelphia Pa Davis, Thos B , Pittsburg Doyle O M , Seneca, S C , Duffield, S P Dearborn Mich **(E)** Ely, J S , Barnesville Ohio Eice Bros , Galena Ill **(F)** Frankhauser F W Reading Pa Fessenden C S D Mobile Ala Fish Wm H , Baylis Ill FitzHugh, J A Amesbury Mass **(G)** Garlock, C L Ann Arbor Mich Gibson Maris Wilkesbarre Pa Girard A C Fort Sheridan Ill Gihon, A L Washington **(H)** Hausmann, Wm Kewaskum Wis Heath F C Indianapolis Ind Howard E C Philadelphia Pa Holmes Bayard Chicago Ill , Hummell & Parmele Philadelphia Pa **(I)** Imperial Granum Co , New Haven Conn **(K)** Knox, S B P Santa Barbara Cal , King Chas Lee Lamanda Park, Cal **(L)** Long, F A Madison Neb Lord & Thomas, Chicago, Ill , 2 **(M)** McGahan C F Aiken S C McArthur Hypophosphite Co Ansonia Conn Maltine Mfg Co New York City 2 Mattison, J B Brooklyn N Y Mathews J M Louisville Ky Morris R T New York City **(N)** Nowlin A Hutto Texas Noble C P Philadelphia Pa **(P)** Patton Ella M Quincy Ill Parke Davis & Co , Detroit Mich Post Graduate Medical School, New York City Patton E M Quincy, Ill **(R)** Rogers S F Troy N Y Rouvier Jules Beyreuth, Syria Reed C A L , Cincinnati Ohio Rumbold T F San Francisco Cal **(S)** Schachner Aug Louisville Ky Stechert G E , New York City, Sanders Enno, St Louis Mo **(T)** Toner J M Washington D C Tuley Henry E Louisville Ky **(W)** Wheeler W G Chelsea Mass White, J A Richmond Va Waterman, O M , Milwaukee Wis **(Y)** Yocum J R Tacoma, Wash

Blank Applications for membership in the ASSOCIATION at the JOURNAL office

The Journal of the
American Medical Association

Vol XXI CHICAGO, NOVEMBER 25, 1893 No 22

ORIGINAL ARTICLES

INTUBATION AND TRACHEOTOMY IN DIPHTHERITIC CROUP, WITH REPORT OF CASES

BY WALTER B JOHNSON, M D
SURGEON TO THE PATERSON EYE AND EAR INFIRMARY PATERSON, N J

The operation for intubation of the larynx is growing in favor in this country and abroad, although it is not calculated to, and does not, fulfill all the expectations of some of its most enthusiastic advocates, it is an operation, which if performed with reasonable skill and delicacy, is attended with the minimum amount of danger and results in a high percentage of recoveries, considering the dangerous complications which occur in the course of the frequently fatal diseases for which it is performed

The operation of tracheotomy still has its field of usefulness, and will certainly maintain an important position on the list of scientific surgical procedures, even though it is at present, by many authorities, placed in a secondary position, and in the opinion of the writer of this paper should rarely be performed until after intubation has been thoroughly tried and failed

Could all the statistics of the operations for intubation of the larynx, performed since the time of its introduction and adoption by the medical profession be gathered together and presented, they would certainly show that hundreds of little sufferers, who would have died of strangulation, have been saved from *that* at least, by the timely introduction of a tube For, while the percentage of recoveries varies from 27 to 34 per cent, according to the statistical reports of various authorities, the percentage of cases in which the operation was a scientific success and accomplished its mission in relieving the dyspnea, and in rendering the patient comfortable, even though death eventually ensued, would be very high Many cases which could never have been reached by any other method have been intubated in consequence of the more general use of the intubation tube, in comparison to the use of the tracheotomy tube, before or during the time of the adoption and performance of intubation

Even though the percentage of recoveries after intubation, were not higher than the percentage of recoveries after tracheotomy, the number of lives saved would be as much greater, as the proportionate number of intubations would exceed the possible number of tracheotomies which might have been performed if intubation had never been suggested

Since 1880, when intubation was first proposed by Dr O'Dwyer, the number of intubators and the number of intubations have increased until they number thousands and there is hardly a city of any importance in the country where the operation for intubation is not performed

During the time passed in the development of intubation, the number of advocates of tracheotomy as a primary procedure has materially decreased, and the operation has been performed in a comparatively small number of cases, although there are still a considerable number of eminent surgeons who prefer it

The indications for intubation, are the presence of the characteristic symptoms of laryngeal stenosis and the operation should be performed immediately after these symptoms have developed, and not after the dyspnea has become so severe that great cyanosis and carbonic acid poisoning are present, to complicate the condition, although no case in which the operator is satisfied that dyspnea is due to stenosis should be declined, even though it were apparently *in extremis*, as the operation almost always gives comfort to the patient, and recovery may result in cases seemingly hopeless

The age of the person should not be especially considered, as the comparative percentage of recoveries after intubation, in cases under three years of age is proportionately very large The instruments for intubation which have been especially devised by Dr O'Dwyer are apparently of the best possible size and shape, no suggestion of material value having recently been made, except a change in the shape of the tube, which consists in a decided rounding and flattening of its distal end, which is designed to prevent accidental false passage of the tube through the ventricle of the larynx[1]

Great care should be taken in the selection of instruments, and only those manufactured by reliable manufacturers and made after the most approved and latest pattern accepted They should be kept perfectly clean and carefully sterilized after each operation and always ready for immediate use It is very common for the tube indicated as the correct size for a child of a given age, to be difficult of introduction, in which case the substitution of the next size smaller is admissible, as there is very little possibility of the tube passing below the vocal cords, and it is practically impossible for it to pass through the sub-glottic constriction of the larynx without the employment of unjustifiable force

In addition to the intubation instruments, a complete set of trachea tubes and the necessary instruments for performing tracheotomy should always be carried in the same bag, in order that life may not be lost when the operation for tracheotomy is necessary or indicated by the occurrence of one or the other of the accidents which may happen during intubation

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[1] Since writing the above, the set of instruments for intubation presented at this meeting of Association by Dr F E Waxham, has been examined and is a decided improvement over the old set, particularly the introducer, which can be thoroughly sterilized and has an obturator attached made from a watch spring which can not kink as it is withdrawn from the tube

The difficulties which attend the operation for intubation and which are still insurmountable are the presence of partly adherent membrane, which might be removed were it possible to devise some suitable method of reaching it, the pushing down of membrane before the tube during its introduction which will always be a source of danger, although if proper attention is given to detail in operating, and especially in holding the tube exactly in position during the extraction of the introducer and the subsequent removal of the string, the presence of membrane in or below the tube, occluding it, which must result in the immediate death of the patient unless the tube is coughed out or removed at once The presence of membrane in the bronchi is a complication which can not be affected, either by intubation or tracheotomy

Coughing out the tube can not be prevented, it may fall upon the floor or be swallowed, which is not serious as it indicates a probable decrease in the laryngeal edema, and in nearly all cases dyspnea will not return until ample time has elapsed for the intubator to be summoned and to re-introduce the tube The removal of the tube may be easily and readily accomplished when indicated by the pressure method suggested by Dr Cheatham of Louisville

If dyspnea return after relief has occurred from a previous intubation, the tube should be removed on trial and re-introduced, this procedure frequently being beneficial in loosening partly detached membrane The tube may be removed on trial some time between the fourth and sixth day if the symptoms are favorable, although it is generally safe to leave it, if the patient is doing nicely, until the pharyngeal deposit has cleared up

The operation for tracheotomy, if for any reason intubation seems impracticable, should be performed at once when there is irritability of the larynx preventing retention of the tube, when partially detached false membrane frequently embarrasses the breathing, when frequent plugging of the tube with thick viscid mucus and shreds of membrane persists, when membrane is pushed down before the tube and can not be expelled, when the tube has entered the ventricle of the larynx, making a false passage, when the tube has passed below the true vocal cords and can not be extracted, when there is inability to sufficiently nourish the patient, when there is continued irritation of the bronchi from the excessive aspiration of food

The difficulty in feeding and properly nourishing the patient after intubation, is one of the most important factors, and certainly militates against a favorable termination, although some improvement has been made and the danger somewhat lessened by the adoption of the posture method of feeding, suggested by Dr W E Casselberry of Chicago

The inability to sufficiently nourish the patient is undoubtedly a serious drawback to the operation The feeding should be carefully considered, the physician in charge making it an invariable practice to personally instruct the persons who are to care for the patient, indicating the amount and kind of food to be administered, the proper intervals of time between feeding, and observing that the ability exists to carry out the directions For it is quite possible that the patient should become discouraged, and the case lost, through violent cough superinduced by injudicious efforts at feeding

A thorough and complete knowledge of the requisite medical treatment is very essential to the favorable termination of the disease and each step must be carefully marked, and in addition to the general medication any special symptoms or complications appearing during the progress of the disease must be immediately combated

The fact that intubation and tracheotomy are purely mechanical procedures, only calculated to carry the patient along until such time as the appropriate medication shall have had the desired effect, must never be lost sight of, and strict attention given to every detail of the medication, nourishment and care

There is no question but that the prognosis in either intubation or tracheotomy is materially affected by the variety of the disease, and the presence or virulence of the epidemic, the mortality always being greater at the height of the epidemic, when the ratio of deaths from all causes is greatest and severe complications more apt to be present

If the dyspnea comes on considerably after the onset of the disease, and membrane has been present in the fauces and disappeared, the prognosis is particularly favorable, especially if the patient is not suffering from severe complications, serious exhaustion or fatal systemic poisoning

Case 1 —June 29, 1891, in the practice of Dr D T Bowden, a stout, robust, male child, who had been ill five days, although the parents did not think of diphtheria, his throat was sore but he played about until twenty four hours before present date, when the laryngeal symptoms began to develop and they have increased steadily until present time, with hoarseness, croupy cough and considerable restlessness Intubation was positively indicated, and was performed at 11 30 A M The tube was readily introduced on the first trial but did not give full relief to the dyspnea at first, there was great irritability of the larynx, cough, and occasional stoppage of the expiration, until ten minutes after the tube was introduced, when a complete ring of membrane was expelled about the size of the lumen of th trachea, and about one-half an inch long After this th relief was complete, the pulse being 130, and the respirations 24 per minute the temperature 100

June 29, 5 P M The child was fairly comfortable, pulse 142, respiration 28, the air entered lower lobes of the lungs freely, there were some moist râles, was able to take nourishment in Casselberry position, the medical treatment—nourishment, stimulation, bichlorid and calomel

June 30, A M Dr Bowden has examined his water and reports albumen present in considerable quantity

June 30 P M Child not doing well, respiration increased to 45, and marked sinking of the epigastric region, interference with the respiration Some bronchial breathing, pulse 160 and feeble The child has taken fair quantities of nourishment, the tube was removed by the pressure method of Dr Cheatham of Louisville, without any difficulty or distress, after which a piece of membrane about the size of the first, evidently from the trachea, was coughed up, the dyspnea slightly increased and the tube was re introduced, there was no improvement, the respirations continued to grow more rapid and shallow and the child died at 7 A M July 1, the tube having been retained forty-four hours In this case the tube failed to reach the disease

Diphtheritic membrane was present in fauces when firs seen by Dr Bowden, the 3 to 4 tube was used and wor forty-four hours The principal complication and cause o death was extension of the disease to the bronchi

Case 2 —June 30, 1891 Hogeman, age 2 years 11 months, a strong, healthy female child has had diphtheria five days, a patient of Dr B C Magennis Laryngeal symptoms thirty hours Membrane in fauces well marked The child was almost moribund, respirations catchy

The tube passed into the esophagus on first trial, tube 2-year size used and passed on second trial, respiration

The cases here reported, nineteen in number, are tabulated for ready reference There were six recoveries in all, one of which resulted from an operation for Tracheotomy, which was performed after Intubation had failed The Tracheotomy was considered necessary in consequence of a feeling of uncertainty regarding the whereabouts of the tube

Date	No	In the Practice of	Sex	Age	Duration of Laryngal Symptoms	Duration of Diphtheria	Cause of Death	Complications	Result	Size of Tube	Faucial Diphtheria
June '91	1	Dr D T Bowden	M	3 yr 10 mo	24 hrs	5 days	Extension to Bronchi		Died 41 hours after Intubation	3 to 4	Present
June, 91	2	Dr B C Magennis	F	2 yr 11 mo	30 hrs	5 days	Extension to Bronchi	Loose Membrane	Died 3 days and 6 hours after Intubation	2	Well marked
Aug, '91	3	Dr P A Harris	M	3 years	24 hrs	4 days	Sepsis	Pulmonary	Died 36 hours after Intubation 14 hours after coughed out tube	3 to 4	Present
Sept, '91	4	Dr W S Hurd	F	14 months	24 hrs	1 week	Asphyxia		Died immediately from membrane pushed down before tube	1	Present
Oct, 91	5	Dr C Terriberry	M	4 yr 6 mo	5 days	5 days		Loose Membrane	Recovered tube retained 24 hours	3 to 4	Started in Larynx, present later
June, '92	6	Dr G W Terriberry	F	3 yr 6 mo	30 hrs	1 week	Cardiac Paralysis	Exhaustion	Died 5 days after Intubation	2	Present and ret d after clearing
Sept, '92	7	Dr Colfax	F	4 years	4 days	4 days	Cardiac Paralysis		Died 15 hours after Intubation	3 to 4	Present
Sept, '92	8	Dr J M Stewart	M	4 yr 6 mo	4 days	4 days			Recovered Tube introduced 3 times retained 10 days	3 to 4	Slight membrane
Oct '92	9	Dr J H Banta	F	8 years	24 hrs	4 days	Sepsis		Died 2½ days after Intubation	3 to 4 & 5 to 7	Present and marked
Oct, '92	10	Dr R Neer	F	9 years	4 days	4 days	Pneumonia		Died 4 days after Intubation	5 to 7	No Deposit till later
Dec, '92	11	Dr Flitcroft	F	8 years	2 days	3 days	Exhaustion		Died 6 hours after Intubation	5 to 7	Marked
Jan, '93	12	Dr P A Harris	M	4 yr 6 mo	2 days	2 days	Dyspnea	Loose Membrane	Died 12 hours after effort at Intubation	3 to 4	Very Extensive
Jan, '93	13	Dr Wm Blundell	M	3 yr 4 mo	2 days	1 week			Recovered Intubation failed Operation Tracheotomy, tube 19 days	2	Not present till later
Feb, '93	14	Dr J H Banta	F	6 years	48 hrs	3 days	Pneumonia	Extension to Bronchi	Died, tube retained 6 hours	5 to 7	No membrane present
Mch '93	15	Dr D T Bowden	M	4 yr 6 mo	5 days	2 days	Sepsis		Died 24 hours after Intubation	3 to 4	Thick black membrane
Mch, '93	16	Dr Geo Fischer	F	3 yr 6 mo	24 hrs	48 hrs			Recovered tube removed on the 6th day	2	Considerable membrane
Apr, '93	17	Dr J M Stewart	M	2 yr 7 mo	18 hrs	5 days			Recovered coughed out tube on 4th day	2	Present
Apr, '93	18	Dr Geo Fischer	M	6 yr 7 mo	1 week	1 week			Recovered coughed out tube on 6th day	3 to 4	Not present till later
May, '93	19	Dr Thos Paton	F	3 yr 10 mo	1 week	1 week	Exhaustion		Died 2 days after Intubation	3 to 4	No membrane

artificial, and raw brandy in mouth finally stimulated cough and child came around, relief of dyspnea complete Child restless and pulse not good, ordered feeding by posture method, medical treatment, calomel (gr ½ every two hours)

July 1 Patient has done very well since operation until about 4 30 P M, when the respirations grew more rapid and difficult At 5 45 the tube was removed, by Cheatham's pressure method, without difficulty, some pieces of membrane came away with it and in about ten minutes a complete cast of the trachea, which looked much thinner on the lower end as though it had been expelled entire, it was about two inches in length The child breathed some easier but the cough was very croupy At 7 30 was hastily called and found the child considerably cyanosed, re introduced tube and respirations became very quiet and comfortable, the patient was much exhausted and wished to be let alone, did not cough much although there was mucus in the tube, would not expectorate, pulse somewhat irregular, respirations 40 per minute

July 2 Child passed a very comfortable night, breathing evenly and slowly, the parents report that she took a large amount of nourishment and in the morning was very bright and looked much better, pulse stronger, slower and regular, 140, respirations 36 per minute In the afternoon the child's respirations became more hurried and restlessness developed, with considerable swelling of the glands of the neck, there was decided evidence of a stoppage from the presence of membrane in the trachea as shown by the puffing out of the suprasternal space at each expiration

The tube was again removed, she expectorated some pieces of membrane but no cast

The tube was re introduced in about an hour The patient was much exhausted and rallied very slowly, she still had symptoms of stoppage below the tube and the string was left attached to remove tube in case of necessity, but she grew worse until 11 P M, when she died

She wore the tube three days and six hours The disease undoubtedly extended to the bronchi

Case 3—August 3, 1891 T B male aged 3 years, in the practice of Dr P A Harris Was taken ill on Thursday four days before first seen, the case was rather obscure and the parents did not think it very bad, first developed croupy symptoms during Monday morning which increased during the day until evening

At about 10 P M, and less than twenty four hours after the onset of the dyspnea, the child was greatly distressed and could not get sufficient air, had marked episternal sinking and also great sinking over the diaphragm, crowing respiration, and a very stridulous cough Has been constantly upon the bichlorid treatment

After being placed in the proper position intubation was attempted but did not succeed until the third trial, the tube passing into the esophagus twice There was almost immediate cessation of the dyspnea, and the child, soon after the operation, seemed to feel very comfortable The pulse was 144, the respiration 28, the color good and no stridor on respiration

August 4 Dr Harris reports respiration 27, pulse 150, the child is taking very little nourishment and has a severe cough at every effort Advised Casselberry's method of feeding, and that the head be held low enough to make it absolutely impossible for food to pass into the trachea In afternoon when coughing, the tube was expelled, the feeding had been easily and successfully accomplished by the Casselberry method

The child breathed about as comfortably after the tube came out Five hours afterwards the patient was breathing fairly well, but Dr Leal stated that the child had lung complication, pulse 150, respiration about 30 The parents would not consent to have a re-introduction of the tube, even if it became necessary, at the time there was not sufficient obstruction to make it advisable The child had no return of the dyspnea that indicated a re-introduction of the tube, but grew gradually weaker and finally passed quietly away

Death, caused by sepsis and pulmonary complications, occurred on Wednesday morning, about thirty six hours after the intubation and fourteen hours after the tube was coughed out

Case 4—Sept 21, 1891 M D female child, age 14 months, a patient of Dr W S Hurd Child had been ill one week, with symptoms of stenosis about twenty-four hours Had been strong and well but was extremely cyanosed, or rather had the appearance of a child having more difficulty in expiration than in inspiration

The tube was introduced three times, slipping on two occasions into the esophagus, and when in the larynx not seeming to afford any relief The child died during the efforts to introduce the tube

The cause of death was membrane in the trachea which was pushed down before the tube and could not be expelled

Case 5—Oct 9, 1891 Patient of Dr C Terriberry, male, 4½ years old Diphtheritic symptoms first started in larynx five days before, some faucial patches second day after Moderate temperature Bichlorid treatment commenced at once, patient gradually grew worse from Saturday until Thursday evening, when he was intubated with instant relief, no difficulty in operating, tube passing in easily Patient had a good night, taking considerable nourishment

In the morning Dr T reported his temperature 99 1 10, pulse 120, tongue coated, bowels and kidneys acting, the urine being somewhat scanty and very high colored Breathing about 30, and very comfortable

At about 3 30 P M patient had a choking spell in which he became very much cyanosed and after a severe struggle for breath and hard coughing he quieted down again so that at the time of making visit he was breathing very comfortably, he also spoke in a moderately loud voice, and it seemed as if the tube might have been coughed up and swallowed

Was sent for at 6 P M, and was informed that the child had had two such spells, and decided to re-intubate On examination found the tube in situ, and removed a considerable quantity of mucus, concluded that there was membrane below the tube and that the tube must be removed

Suddenly expiration ceased and shortly after, inspiration also, he became extremely cyanosed The spasm came on while trying to induce him to open his mouth to allow removal of the tube, the jaws tightly closed and could not be opened, it seemed as though he was about to die, when finally his jaws were separated and the tube was removed without much difficulty by Cheatham's pressure method, by producing artificial respiration he was induced to breathe again and did so quite comfortably

At 9 P M visited the house again, found him breathing rapidly and with difficulty, he had taken considerable nourishment but the larynx was evidently obstructed Intubation was suggested but the mother would not consent as she was convinced her child must die The patient, however continued to take the medicine regularly and gradually improved He finally made an excellent recovery, the tube having remained in place only twenty four hours

Case 6—June 19, 1892 Dr G W Terriberry's patient Female, age 3½ years One week ago the mother first discovered that the child had sore throat (she is slim, with small neck for her age), she seemed to get on nicely until the afternoon of the 18th, when she began to get hoarse, she gradually grew worse until I saw her on the evening of June 19 Immediate intubation was advised, the procedure was accomplished, the 2-year tube introduced, the impression being that the child was only 2½ years old, it was passed in readily on the second trial with immediate relief of the breathing, she was able to swallow without much difficulty in the Casselberry position, and the string was removed one-fourth of an hour after the intubation

The child slept well all night and was in good condition in the morning In consequence of inability to procure the services of a nurse, the child took very little nourishment after the intubation, she seemed to be more restless during the afternoon and evening, the breathing was very comfortable, although considerable quantities of mucus were present, a nurse was secured The medical treatment consisted of milk and whisky and one thirty-second of a grain of bichlorid every two hours

June 23, A M The child has been fairly comfortable since last note but has taken only small amount of nourishment, the membrane has about disappeared from the fauces, her pulse has ranged from 124 to 150, and her temperature from 101 to 102 2-5, it came down readily after alcohol baths Had some difficulty with breathing for two or three hours last night, due to membrane probably about the head of the tube, her respiration has ranged from 24 to 30, her tongue is still very much coated and she complained of some soreness about the throat

June 24 Patient had a more comfortable night and has taken somewhat more nourishment Temperature, 100 3-5 There seems to be some re formation of membrane in the pharynx, have used a spray of the peroxid of hydrogen solution During the afternoon had two or three attacks of cyanosis apparently due to cardiac failure, the respiration being about normal at those times

The tube was removed and rectal alimentation resorted to, the respirations were not impeded but she continued to sink, and died of exhaustion five days after intubation

Case 7—September, 1892 Female, 4 years of age Dr. Colfax, attending physician On the fourth day of the disease the patient had a sinking spell with considerable dyspnea in the morning, and Dr C thought the child was dead, she rallied, however, and when first seen was laboring with marked dyspnea, pale and anxious look, feeble and irregular pulse, immediately proceeded to intubate, which was done without any great difficulty on the second trial, although the child became very much exhausted

There was considerable swelling of the epiglottis, in about twenty minutes the breathing became perfectly easy and the child said she felt very comfortable, she had a very fair pulse and died fifteen hours after the operation, from cardiac paralysis, the respiration having been entirely comfortable and easy to the end

Case 8—Male, 4½ years old, patient of Dr J M Stewart. Was called on September 1, P M to see the child He was at that time cyanosed, and had marked sinking on respiration, in the epigastric and suprasternal regions, had cough and difficulty in phonating He had trouble with the larynx four days, at which time the whole difficulty seemed to commence, he having been playing about all the previous day and had not complained of feeling ill On examination there was some little deposit on the fauces, the tongue was coated

The operation was performed without much difficulty but was followed by vomiting of curdled milk The boy had no trouble in taking a considerable quantity of nourishment in the Casselberry position, or even in eating ice when sitting up at any time during the disease The tube seemed to cause some cough, his temperature was not high, 100, and he was quite comfortable, he had no complication or drawbacks of any kind He coughed out the tube on the sixth day, Sept. 7, 1892 September 8, P M The tube remained out thirty-six hours, when there seemed to be a return of the bad symptoms, increased temperature and pulse, with difficulty in breathing, decided to re introduce the tube in the evening there seemed to be edema about the epiglottis, so that it was difficult to introduce the tube and a 2-year size was tried and introduced easily, but was soon coughed out again when the regular size was again tried and introduced September 12 The tube is still in place, patient takes his nourishment fairly well, has a temperature varying from 99½ to 101 in the axilla, no deposit in the pharynx, tongue again clearing September 13, A M Tube coughed out, temperature normal, pulse good, the child hungry, breathing comfortable Uninterrupted recovery

Case 9—Oct 13, 1992 Female 8 years old, Dr Banta attending physician Has had sore throat for four days; trouble with respiration for twenty four hours, is small for her age First seen in the morning, better at dinner time Intubation made at night Could not introduce the regular sized tube but used a small one 3-to 4-year size, instead of 5 to 7 Relief marked, tube remained in twenty-four hours when it was coughed out followed by increasing dyspnea Again intubated at 9 P M, succeeded in introducing the 5 to 7 tube with immediate relief October 15, Doctor reports her having had a good night and her condition improved The child lived until October 10 A M, never having any difficulty with breathing and died of sepsis

Case 10—Nov 17, 1892 Dr R Neer's case Female, age 9 years Patient had increasing hoarseness and cough for four days, there was no indication of a diphtheritic deposit in the pharynx Her tongue was coated, she had a rapid pulse and great difficulty, especially in inspiration Marked supra-clavicular sinking, a very hoarse stridulous cough November 18 The trouble had increased, the dyspnea was attended by the anxious look, but there was still no deposit in pharynx the pulse was 150 and of poor quality Intubation was advised and afforded immediate relief The tube, 5 to 7, was introduced with perfect ease at the first trial November 19 Dr Neer reports the case as progressing favorably, pulse and temperature slightly accelerated, great difficulty experienced in the feeding, a slight amount of milk causing her to cough

November 20 Child bright and feeling very comfortable, says she did not mind the introduction of the tube, that it did not hurt her and made her feel much better, she can take milk in the Casselberry position without coughing much, but she does not like to take it, she drank a wine glass of milk and whisky while Dr Neer was present On examination it was thought that there was a suspicion of deposit upon left tonsil Bowels moved twice during the day

November 21 The child has been very restless and wanted the tube removed, she has some dyspnea, although the day before there was none, there was a characteristic membrane in the fauces The tube was removed, there was nothing in it, the disease was below the tube The child died in the evening from pneumonia, having been twelve hours without the tube, the dyspnea not having been marked

Case 11—December, 1892 Dr Flitcroft, attending physician Female, 8 years old Had been ill three days, the laryngeal symptoms had been present two days and were very severe, the child was very much exhausted before the operation and the pulse was very rapid and irregular The diphtheritic deposit was very great Intubation was performed in the usual manner, a 5 to 7 tube being used The dyspnea was entirely relieved, but the child never rallied and grew continually weaker until six hours after intubation, when she died from exhaustion

Case 12—Jan 20 1893 Henley, male, age 4½ years patient of Dr Harris, duration of diphtheria forty-eight hours Membrane below the tube Death resulted in twelve hours after efforts at intubation The child had excessive diphtheritic deposits which seemed as if they had been much longer in coming than the history indicated, the tongue wes very much coated and brownish Patient cyanosed and breathed with great difficulty The intubation was made six different times, the length of time which the tube could be retained varying from one to four or five minutes, when the expiratory movement would be accompanied by a decided flap of loose membrane over the distal end of the tube, the parents objected to further efforts and the patient was left to die Tracheotomy was advised but not permitted

Case 13—Jan 24, 1893 Dr Blundell's patient Male, 3 years, 4 months old Patient had had laryngeal trouble every night for a week, but seemed in good health until the evening of the 23d, when he was first seen by Dr Blundell At noon on the 24th his dyspnea was so marked that intubation was advised, a small tube (2 years) was used and placed in position without any difficulty, giving great relief until three and one half hours after, when he had a coughing spell and coughed up a considerable piece of membrane, this effort was accompanied with such severe strangulation that his mother thought he was dying The dyspnea returned and was as severe as before intubation On examination the tube could not be found, and as it was small for his age it was feared it might have passed below the vocal cords and when the tube size 3 to 4, which was tried, did not slip easily into the larynx, no force was used, but tracheotomy advised and performed in the usual manner

January 25 He had a fair night and took considerable nourishment He expectorated during the night a moderate quantity of diphtheritic membrane Looked very comfortable and did not make any complaint January 26 Has had one or two attacks of coughing, expelling considerable quantities of diphtheritic membrane, has taken a fair quantity of nourishment, says he has no pain Temperature 101, pulse 120, has a sore on his lip with diphtheritic deposit on it which seems to be thinning, has taken ½ grain calomel every one and one-half hours January 27 Has had a temperature of 101 7-10 during the night, coughing more frequently than on the night before Has a considerable swelling and some deposit about wound which has gaped a great deal since swelling came on and is somewhat red about the edges He looks well, his tongue is clearing at the end, can not breathe through mouth yet Temperature 100, pulse 112 January 28 Wound affected with considerable deposit, swelling and redness Had a hemorrhage from the nose last night, considerable blood came from the tube His general appearance is good, tongue is clearing and is taking some nourishment His temperature has not been higher than 100 and his pulse 116, this morning his temperature is 98, pulse 102, respiration 28 or 30, has swelling about the wound Ordered peroxid of hydrogen, 15 volume solution to be applied to wound January 29, P M Swelling about wound very much diminished and deposit nearly cleared, he passed a very comfortable night and day, deposit on lip nearly all gone, he is taking increased quantity of nourishment He had a hemorrhage from the tube, during the night about one-half teaspoonful of bright red blood, the highest temperature 99 This evening the temperature is 98 1-10 his pulse 100, his general condition good, he passed intubation tube from bowels, he will not take his medicine

January 30, A M Very comfortable, a few drops of blood coughed up in the night at about 10 A M, tongue and membrane clearing, increased quantity of nourishment Pulse 100, respiration 24, temperature normal, he can breathe through larynx with tube closed January 31 and February 1 Condition has remained the same, have great difficulty in getting him to breathe through his mouth, pulse 100, temperature 98 to 98 7-10, respiration 24 to 28, taking nourishment, no deposit on wound, tongue rather more coated than it has been before February 2 Condition about the same, except somewhat improved, especially the wound, slight bleeding at times with expectoration Some milk has passed down and been coughed out of the tube, his urine, which has been scanty is more profuse, his bowels are regular February 4, P M This afternoon removed the tube, it was followed by such great dyspnea that it was necessary to introduce another The smaller sized tube was used, in introducing the canula during the afternoon a piece of granulation tissue seemed to have been cut off It was about the size of the fenestra and one thirty-second of an inch thick

He seemed in good condition this evening, his pulse ran up during and after the re-introduction of tube In swallowing food, regurgitation of some of the fluid portion occurs February 5 Temperature ran up to 102 with pulse 120, respiration 36 Child was not restless, gave quinin, ordered mild cathartic as bowels had not moved, had coughed up a great deal of mucus February 6 A M Temperature normal, pulse 109, respiration 30 Bright and feels quite comfortable February 7 Very well in morning, at noon, temperature 104, respiration 36, pulse 132, granulations around wound very puffy and large, is talking in whispers through mouth, will not permit tube to be corked February 10 Has had no elevation of temperature since Each night at about 1 A M has a sweat with considerable depression, his pulse becoming soft and much slower Using glycozone on the wound and applying nitrate of silver to granulations His urine is clearer, his tongue still coated, he can speak much better and has had a cork in the tube for half an hour without difficulty of breathing, has less trouble with food passing into the tube On the nineteenth day after introducing the tube he was induced to have the cork in, which he did and kept it there all day and did not want it removed In the evening the tube was removed and he has made an uninterrupted recovery

Case 14—Feb 18, 1893 M Dunning, 6 years, female, patient of Dr Banta, diphtheria three days Croup forty-eight hours, increasing, there was some question as to the presence of any diphtheria in this case, no membrane having been seen February 18, 12 M was called to see child, seemed fairly nourished, had great dyspnea, some cyanosis, history of previous attacks of inflammatory croup No membrane in the pharynx, after steaming and slacking lime for two hours and no improvement taking place, her respiration being 37 to 40, her pulse 150 to 160, intubation was ordered and performed, tube, size 5 to 7 The tube necessitated the use of a slight degree of force but was introduced on the first trial She had immediate relief from dyspnea but did not get into a good sound sleep She was able to take her nourishment and did so during the night February 18 2 P M Child found in great discomfort, breathing rapidly and very shallow with some apparent effort but not sufficient dyspnea to indicate any closure around or stoppage in the tube Her pulse was 180 or more, her temperature 106½ She undoubtedly had a very severe attack of pneumonia from which she died twelve hours after intubation

Case 15—March 4, 1893 Dr Bowden's patient, male, 4½ years of age Duration of disease four or five days Duration of laryngeal symptoms two days, was a strong well-nourished child Dyspnea very marked, great supra clavicular sinking and depression of epigastrium on inspiration Very dark-looking membrane, which was separated during the intubation, the urine was reported scanty and containing considerable quantities of albumen He has a fairly good pulse, complained of severe headache The intubation was performed and a piece of membrane from the fauces was drawn into the tube, several trials were made the tube passing into the esophagus, it was finally introduced and afforded immediate relief March 5, A M Child slept well after the intubation, but was somewhat delirious during the night, takes his nourishment well in Casselberry position He looked very badly, has a pulse of 160 or more, and rapid respiration without any special dyspnea, no lung trouble apparent, temperature 103, axillary The child continued to sink and died of sepsis in the afternoon, having no further laryngeal stenosis

Case 16—March 29, 1893 Dr Fischer's patient Female 3½ years old Forty eight hours since onset of disease and twenty-four hours since laryngeal symptoms developed Made the intubation without difficulty at 9 A M Great dyspnea was present and some cyanosis The relief was instantaneous Coughed up considerable mucus, the tongue was coated and the tonsils had considerable membranous deposit Child went to sleep immediately after the operation

March 30, A M Temperature 100, pulse 130, respiration 24, coughed up some mucus Dr Fischer is alarmed at the character of the pulse, which is feeble, otherwise the child is doing fairly well, taking considerable wine and milk April 2 Child had done well since, respiration 18 or 20, pulse 95, but feeble, temperature from 99 to 100, is troubled by much coughing, takes fluid nourishment fairly well, also wine and brandy and ice cream April 4 The child has been very comfortable, the pulse ranging from 95 to 120 and full, the temperature 99 to 99½, the tongue and tonsil have cleared and the child has taken a fair quantity of liquid nourishment and stimulants, there has been but little difficulty with the feeding The tube was removed by the Cheatham method without difficulty, and the indications pointed to a speedy recovery, the respirations being free and even, and the condition favorable, convalesced rapidly, she wore the tube six days before removed

Case 17—April 6, 1893 Male, age 2 years 7 months Dr Stewart's patient Five days since onset, has only had difficulty of breathing about eighteen hours, had great cyanosis and dyspnea Intubation was made and there seemed to be stoppage at head of tube, could not expectorate a thick ropy mucus, respiration rapid and somewhat difficult in the inspiratory movement, no difficulty in expiration After about an hour seemed to be getting plenty of air and string was removed April 7 Had a restless night with severe cough, coughed up tube at 8 A M At 10 30 was breathing quite comfortably The child grew gradually worse and was re-intubated at 4 30 P M with instant and great relief April 8 Child has had a comfortable night, has slept well and is in good condition Temperature normal, has taken considerable nourishment In the evening Dr Stewart reports that the child had a severe spell of choking, the parents thought he would die, but was doing well when he saw him shortly after Great difficulty was experienced in taking food, the paralysis of the fauces causing it to come up through the nose April 10 The child coughed up the tube four days after intubation He continued to improve each day from this on, and finally made a perfectly satisfactory recovery

Case 18—April 22, 1893 Patient of Dr Fischer, age 6 years 7 months, male Diphtheria one week, seemed to start in larynx Has had frequent attacks of croup and the parents took this for one of the same and did not immediately call a physician He continued to grow worse and Dr Fischer was called, he made a diagnosis of diphtheria and in a few days found membrane in the fauces, the croupy symptoms gradually increased, and all night and the day of the operation were very severe, the child was cyanosed and there was a marked sinking of the epigastric region at each inspiration and a great amount of supra sternal depression Intubation was advised and an effort to introduce tube was made, the patient was very docile but all efforts failed The 3 to 4 tube was then tried and introduced at first trial with immediate relief, he took considerable nourishment in the usual posture, and did not have severe cough, although he did cough up a considerable quantity of thick mucus, just after the intubation He grew steadily better each day and on Thursday the sixth day after the operation he coughed up the tube, after which he improved steadily His temperature never ran higher than 101 after the operation Three other children developed the disease after he did, two of them died of sepsis

Case 19—May 12, 1893 Dr Paton's patient Female, 3 years and 10 months old Duration of disease one week, dyspnea gradually increasing Very much cyanosed and nearing dissolution There was no evidence of diphtheria The first attempt at intubation failed, the second was successful and was followed by coughing and expectoration of a considerable quantity of muco pus, the breathing was rapid and the child was extremely depressed and had some sickness of the stomach with slight vomiting, but she said she felt comfortable

May 14 Child seemed better than yesterday when the pulse was 150 and the respiration very rapid Is taking large quantities of nourishment, pulse 120, respiration 42, seems bright and well, coughs somewhat and expectorates quantities of very thick yellow mucus, there is a decided membranous deposit in the throat on last visit, temperature not taken

May 14, P M The child passed quietly away, without any struggle or difficulty in respiration Death caused by exhaustion and possible lung complication, two days after intubation

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EIGHT CASES OF SYPHILITIC STENOSIS OF THE LARYNX CAUSED BY WEB FORMATION, OPERATED BY MY METHOD OF COMBINED TUBAGE AND THE KNIFE

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

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LARYNGOLOGIST TO THE WEST SIDE GERMAN CLINIC MEDICAL EDITOR ELECTRICAL REVIEW, ETC

Syphilitic stenosis of the larynx usually presents to us a pathologic narrowing of its passage, and so to a large degree acts as an interference to free respiration, and thus becomes a condition of alarming danger Little attention was paid to the pathology of this form of stricture or stenosis, and much less special attention to its treatment in the early years of the century Nevertheless, in 1828 we find the great Liston dilating strictures of this kind after performing preliminary tracheotomy, through the tracheal opening, and about that time, too, Bouchut and Horace Green began to operate in a similar way, believing that all forms of stenosis were amenable to treatment by dilatation by means of tubes passed through and held between the stenosed parts Their theories and practices met with much support by the surgeons of that day Even Trousseau once thought of practicing it, but somehow it fell into disfavor, largely because the operation had neither the system nor the instrumentation we now have—and, one by one, they abandoned it, and so it was left to a comparatively recent period

The discovery of the laryngoscope was largely responsible for the revival of Bouchut's and other forms of operations The first disciples of Bouchut and Green were Marduel in 1863, and Delore who took up tubage for stenosed larynges a year later Gradually such famous laryngologists as Stoerck, MacKenzie, Tuerck, Schrotter, Weinlechner, Hering and in our own country, O'Dwyer, began to study the pathology of stenosis of the larynx and its treatment, and the great honor and credit of perfecting the treatment of stenosis of the larynx belongs to O'Dwyer who made tubage of the larynx, a feasible, safe and effectual treatment of stenosis of the larynx

"But honor to whom honor is due" To Bouchut, therefore, we must always look as the father of tubage for stenosis of the larynx

Stricture of the larynx, according to its locality may be placed in one of three classes the supraglottic, the glottic and the infra-glottic, and thus be best studied with regard to causes which bring about the stenosis

The one to be considered here and which forms the subject of this paper is caused by the cicatrices, the scar tissue which results from the healing of ulcers about the larynx, forming web and bands of tissue that narrow and draw together the lumen of the organ in its narrow parts This condition we all know obtains this in the healing of syphilitic ulcers of the larynx There are other forms of suddenly oncoming and gradually increasing dyspneas, such as occur in croup, diphtheria, tuberculosis of the larynx, and particularly in the acute form of laryngeal syphilis Of these forms we already know a great deal and I need not dwell upon them further, but may pass at once to the cicatricial form, where the opening of the larynx is much narrowed by bands or web of cicatrix tissue Many operations and modes of treatment of this form have been devised from time to time, with the most disappointing results, and the later re discovery of tubage, however, bears riper fruit and puts into the shade the work of Bouchut, Schrotter, Weinlechner and the others

The profession at large are thoroughly acquainted with the indications and the steps in the surgical practice of tubage of the larynx, and so I need consume no time with a detailed description of the steps in the operation

I wish only to add to intubation as it is generally known as my own modification, or combined if you please, of operation and tubage

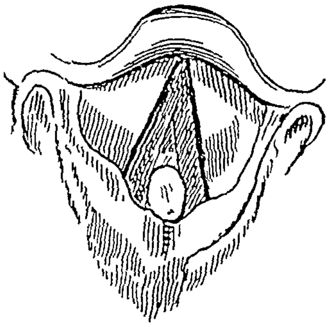

Fig 1

Web forming the Stricture Before Operation

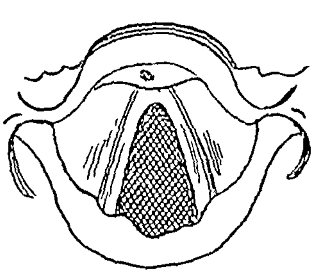

Fig 2

After Tubage and Operation

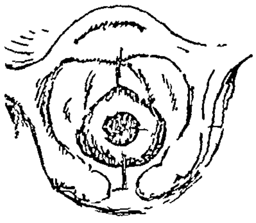

Fig 3

Showing the Tube in position after the Cicatricial Web has been operated upon, and the continued dilatation in progress, until the edges of Web are healed

Below I give my method and the result of eight cases I so treated since 1889 The first case so operated and reported was before the American Medical Association in that year This procedure has served me well, and I am sure it is a far more satisfactory and radical plan of treatment than that of tubage and dilatation of syphilitic cicatricial bands alone, and gives a better chance of permanent cure without in any way increasing the risks of the operation

In the accompanying drawing, is shown the pathologic condition of the first case I had the honor of reporting, as I observed it under the laryngeal mirror, and also the same larynx after operation and tubage The drawing conveys to you a better and clearer idea than the most skillful word painting from my pen, also a third cut which explains itself, and the Lennox Browne knife

The patient, a female age 35, was operated upon March 27, 1889 In this case the stenosis was very marked (I therefore present it as a typical case for my method of operating) On laryngoscopic examination an inflammatory syphilitic adhesion was seen, which existed between the cushion of the epiglottis by a tight fibrous band, uniting the vocal cords along the anterior two thirds of their free border and reducing the glottic chink to the size of a goose quill The right cord was much inflamed and the side of the larynx generally was thickened, respiration was harsh and whistling but regular during the day, there was much dyspnea, on slight exercise, at night and during sleep loud stridulous breathing on inspiration The examination of the lungs elicited dullness over both apices

The patient was placed on large doses of the iodids and cold applications to the throat These conditions of the throat within three weeks' time were much improved Most of the inflammation disappeared

Now for the treatment of the cicatricial tissue Dilatation was tried for three months by means of the O'Dwyer tubes These were worn for two weeks at a time and then changed for larger sizes Under this mode of treatment and dilatation the patient showed much improvement She gained in weight Her lungs again on physical examination the second week showed a very marked change After two months the tubes were discontinued and the patient was discharged Two months later the patient came again under my notice and complained of her breathing, saying that it was not as free as a month previous I again examined her by the laryngoscope, from which I learned that the cicatricial web again began to interfere with normal respiration, closing around as before treatment I concluded from the condition of affairs that it would be best to operate, and thereby if possible, give her permanent relief These were the steps taken for the permanent cure of stenosis of syphilitic cicatrices

This patient was one well trained for laryngoscopic examination and who could stand any amount of laryngeal manipulation A good light was thrown upon the operating field, and thereby the entire condition thoroughly explored before any operative procedure was undertaken A 20 per cent solution of cocain was sprayed over the pharynx, post-pharyngeal wall, soft palate and larynx, in order to produce a complete local anesthesia of the entire surrounding localities A gag was inserted on the left side of the mouth This instrument should be made use of in all such operative maneuvers, so that one may be able to control the opening of the mouth, and not trust to the patient An assistant should control the head of the patient against an ordinary head rest These are the preliminary steps that I generally pursue

The cutting is done with Lennox Browne's laryngeal dilator with cutting blades This instrument possesses these advantages over the Whistler cutting dilator in passing tubes into the larynx many difficulties are encountered, and especially through a cicatricial stricture are much greater than generally stated This instrument of Browne's possesses the advantage of being a hollow tube of Schrotter and the cutting dilator of Whistler, so that the surgeon in operating is always sure by the outward passage of air, when the hollow tube is in the larynx, is able to incise with more certainty as to what he is cutting and, moreover, in case of spasm the air passages are not entirely obstructed

A large size laryngeal mirror is necessary in order *to procure a good laryngeal image* The Lennox Browne cutting dilator was introduced with ease and the cicatricial web cut through The breathing during the introduction of this instrument was momentarily disturbed, after its complete passage normal breathing was carried on through the hollow opening in the dilator Hemorrhage was very slight After the incision the instrument was withdrawn and the larynx thoroughly sprayed out A few minutes later a large size hard rubber intubation tube was introduced into the larynx and kept there for three days without its removal Cold applications by means of compresses were used for forty eight hours with irrigation of the larynx, also spraying with a 10 per cent solution of cocain for the relief of pain, this was continued for two days with much relief to the patient Iodid of potash was again resorted to Three days later the tube was removed and again replaced An examination after the first removal of the tube showed a great improvement and healing of the wounded cicatricial web The cicatrix was diminished, and the size of the opening made by the incision was thus kept open by the continued dilatation of the larger size tubes, until the edges of the cicatricial tissue were well healed The time of healing of these edges lasted seven days The tubes should be worn for two weeks at least after their first introduction, and should be removed daily for cleansing Astringent solutions should be used in spray form for after treatment

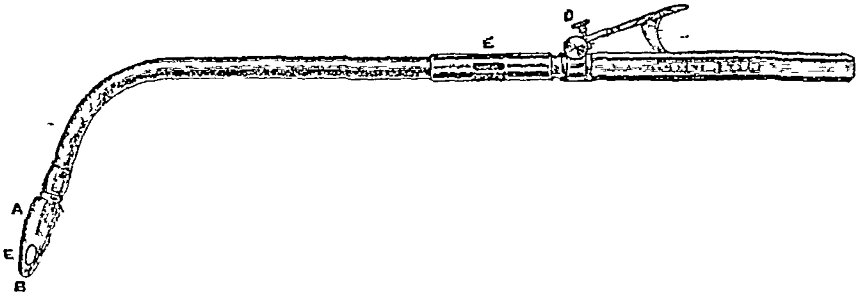

Fig 4 The Lennox Browne Hollow Laryngeal Dilator with Cutting Blade
A—Terminal of the Hollow Dilator containing the Cutting Blade B the extent of which is regulated by the screw at D EE—Show openings for passage of air

This patient shown you made a complete recovery *as the result of this operation It is now four years* since the tube has been permanently removed, and from what you can see by the condition of his larynx which remains in the same state as after the incision, is certainly gratifying The patient is in excellent health and breathing at a normal rate

This method of treatment seems to me to be of a permanent value as compared with other methods There is no necessity for a preliminary tracheotomy The tedious dilatation with dilating instruments for an indefinite length of time, and then with a view of a non success

I do not mean to say that every case can thus be treated, but there are cases which come under our notice for treatment, where such treatment by this mode I here introduce deserves a trial

The seven other cases that came under my observation since then were practically similar, in all respects to the one I have just reported They were selected from my clinic and private practice, and differed but slightly in the degree of stenosis and the amount of cicatricial web They were treated exactly in the same way The web, after being *cut through in each case and kept dilated by* proper fitting tubes healed kindly, and the opening of the larynx restored to its almost normal size

The conclusions I feel justified in arriving at from my operation are these

1 In the first place the destruction of the cicatricial web, by means of the knife, is preferable in every way to the older operation of simple dilatation

2 It is a more radical procedure and the obstructing tissue is destroyed quickly, instead of being pushed aside and thus allowed to absorb

3 The operation saves time, a cure being effected with less chance of a recurrence of the difficulty, without increasing the risks of operation, than by means of simple dilatation

These advantages in themselves seem to me to be sufficient to give my operation some consideration before the plan of surgical interference is finally decided upon

118 E 16th Street, New York City

THE TREATMENT OF HAY FEVER

Special Discussion before the Section of Laryngology and Otology Pan American Medical Congress, Washington, September, 1893

By Drs D Bryson Delavan, New York, Price Brown, Toronto, John O Roe, Rochester, S S Koser, Williamsport, Pa, James E Logan, Kansas City, Mo, F C Cobb, Boston, J H Bryan, Washington, E Fletcher Ingals, Chicago, and John N Mackenzie, Baltimore

Dr D Bryson Delavan, New York City—No more formidable task can be imposed upon one than to open a dis*cussion upon the subject of hay fever I want, however, to* draw you out on the treatment of hay fever, and I hope the discussion will be confined to the local and general treatment There are two conflicting opinions, one is that hay fever is essentially a local condition I think however, there are comparatively few who entertain this idea On the other hand it is largely conceded that however much local influences may have to do with the production of hay fever, there is broadly speaking, in the majority of cases at least, an underlying condition of some sort which tends to the production of this disease, and in so far it is necessary that we should shape our treatment accordingly If we concede that there are general causes underlying hay fever, then we can not rely entirely upon the treatment of local conditions, we must look at the general, as well as the local state of the patient In my opinion it is necessary, in order to treat hay fever successfully, to look into the general well being of the patient, and find whether he is suffering from lithemia, malaria, or any serious disorder of the heart, lungs or kidneys, and to find out the condition of his digestive tract, and to improve these, or any other general or dietetic states which could contribute to the local trouble.

The local treatment of hay fever may be broadly summed up under two heads; that is to say, plans of treatment. Under the first plan we use various heroic therapeutic and surgical measures. Under the second plan we use various general therapeutic measures which are not heroic, the chief object of which is to subdue local irritation, and we also have surgical means which have exactly this same end in view. I believe that where conditions exist in the nose which contribute directly to the irritation of the nasal passages, such a condition as a distinct organic occlusion of the nose, then surgical means may be of great use. But on the other hand, I think that nasal surgery in this department has often been carried too far. I think it is extremely unwise to interfere in a case in which we can discover no good cause for interference, simply because the patient desires to be cauterized or have a spicula of bone removed which he supposes is there, or any other operation. Where there is not present a condition which distinctly calls for surgical interference I believe it is wrong—not only the removal of apparent obstructions, but the use of the galvano-cautery as applied to the nasal mucous membrane. It may be unnecessary to state here that the wholesale destruction of the nasal mucous membrane is not a good means of curing the disease, yet there are men who in a case of hay fever will destroy far and wide, by means of caustics or the galvano cautery, the mucous membrane. I regard that as a pernicious thing which no man who understands the disease will do.

With regard to the use of cocain: every good thing seems to have its other side; the most valuable drugs, opium, for instance, may become the most dangerous, and so with cocain. It is doubtless a great boon to a person suffering from hay fever, but its indiscriminate use in hay fever is productive of serious evils; I am not sure but one would be justified in saying that in these cases cocain improperly used would do vastly more harm than good, and I would like to go on record as distinctly and vigorously opposing its indiscriminate use in these hyperesthetic cases.

To recapitulate: I think if we confine our discussion to a few of the points I have brought up we will have enough to do this afternoon, and I would like to call your attention especially to the recognition and treatment of coexisting conditions. I would also call your attention to the abuse of surgical interference, and the proper and improper use of cocain. I think this discussion should include the best means of treatment, the most practical, the least theoretical and most useful. It seems to me the discussion comes in opportunely here, because this meeting represents such a wide diversity in every way.

Dr. Price Brown, Toronto—I suppose I am particularly qualified to speak on hay fever as I have been subject to it for the last ten years. I don't know, in my personal history, that I have suffered organically in any other way; I don't know that my system has been deteriorated; I don't know that my kidneys or lungs or organs generally have been at all out of order; but I know that periodically about the middle of August I have an attack of this disease. I may say, however, that before I ever had hay fever, frequently with the slightest cold I suffered from closure of the nasal passages to a certain extent; I would find the greatest difficulty in breathing through the nose in cold weather and this finally developed into an attack of hay fever. For two or three years I did nothing special for it, then I used a little cocain; but four years ago the attack I had was most intense; I remember that it did not seem as if I had the power of thinking or feeling anything except the intense sensibility produced by the disease, and I determined to operate upon myself, if I could find the part of the nasal cavity where the thing originated. I felt the indications in the back part of the left naris; after sneezing about one hundred times, I sprayed the left naris with a 10 per cent solution of cocain, and passed probe into the passage. I found at the back end of what I assumed was the inferior turbinated, a sensitive spot, with another about the middle of the passage. I then passed the cautery blade to the posterior spot and turned on the electricity and singed it, then to the next spot and singed that. The result was that for the rest of the year my paroxysms of hay fever were not so severe. The following year the trouble commenced in the back of the right nostril, and when most intense I operated in the same way. I might say in passing that I have had many cases of hay fever under treatment at different times, and one of the prominent symptoms has been exceeding irritation of the palate, particularly the uvula, the patient desiring to scratch the uvula and rub his tongue over it; the result is there is great elongation of this organ. The following year I amputated half of my uvula, which resulted in great benefit. Last year my attack of hay fever was not very severe; this year it has been less than ever, and I have had no operation. It came on about the 24th, instead of the 14th, and I had no hay fever of any account until I started from Toronto, but on my first night in the hot dusty car coming South the attack became intense. I got alumnol the moment I heard of it.

The treatment I generally use is a slight solution of cocain, giving it myself. I use the cocain first and afterwards menthol in albolene. It seems to me the action of menthol in from five to ten or even twenty grains to the ounce has the effect of lengthening the action of the cocain. Latterly I use menthol more than I do anything else in my cases; this year I personally used no cocain whatever. I find it more beneficial to apply the menthol to the throat, and have the patient breathe in through the mouth and out through the nose.

In regard to any occlusion producing hay fever, I mentioned a case this morning where the columnar cartilage pressing against the wall of the nostril caused hay fever, and the removal of that cartilage removed the hay fever.

From the effect that alumnol has had upon me to-day I think it will prove a good thing and I shall try it in future.

Dr. John O. Roe, Rochester, N. Y.—In every case of hay fever there is more or less disease of the nasal mucous membrane, and the more I see of hay fever the more I am convinced of the correctness of this assertion. I have yet to see a patient in whom disease of some portion of the nasal mucous membrane does not exist, and when I hear a case reported in which the patient suffered intensely from hay fever, but without any local disease in the nose, I think that the doctor is in error and did not discover the local lesion, perhaps on account of making only a cursory examination. When we consider that the nasal mucous membrane in adults covers a region of about twenty-six square inches, it is not surprising that disease may lurk in some portions and remain there undiscovered, unless a most thorough examination is made. Hay fever may be considered a neurosis (pardon me for an allusion to the neurotic theory), but we have a great many neurotic people who do have hay fever, and there are many people who have a great deal of disease in the nose who do not have hay fever; but when a person who is intensely neurotic has a good deal of trouble with his nose, he is quite sure to have hay fever. There are a great many, as in Dr. Brown's own case, who have hay fever when there is apparently no neurotic element, and in such cases the disease is, I believe, as much a local disease as any disease can well be. Disease in the nose, that may be the seat of the irritation, is not necessarily confined to any one region, as it has been believed to be confined to the region of the inferior turbinated bodies, either the anterior or posterior end The part that I have found to be most sensitive in these cases is the nasal septum, and this undue sensitiveness has been usually excited by an intermittent or constant pressure of the turbinated bodies The exciting cause of these neurotic conditions I believe to be in nearly all cases intranasal pressure—either from intermittent or constant contact between the different portions of the interior of the nose It is, however, not necessary for this pressure to exist between the turbinated bodies and the septum for it may exist between the turbinated bodies themselves, or the inferior turbinated body and the floor of the nose In the latter instance the extreme sensitiveness is confined to these bodies

The galvano-cautery in the treatment of these cases is frequently the most serviceable agent we have, but there are many conditions of the nose in which its use is not advisable It is useful in vascular turgescence, but can not be employed to advantage in firm hypertrophy or osseous excrescences It is usually not advisable to institute treatment during the attack, although in some instances the abnormal conditions in the nose are emphasized during the attack and should be attended to at that time

The beneficial effect of local treatment can not be better illustrated than by the case of a young lady whom I treated last summer one year ago She was about twenty-three years of age, distinctly neurotic and neurasthenic and her mother was also neurotic She had suffered from hay fever severely for seven years and was willing to have anything and everything done that would relieve her of this distressing complaint As it was so near the time of her attack, I advised her to have the nostril in which she had the most difficulty treated, as she was unable to go through the necessary treatment for the removal of the difficulty from both sides at the same time There was pressure of both the inferior and middle turbinated bodies against the septum This I relieved and carefully treated the nose The result was that she passed through the summer without any trouble in this, her left nostril, while in the right nostril which had not been treated she suffered from hay fever quite severely, although, the left nostril being free, respiration remained unobstructed and she did not suffer the distress experienced when both nostrils were completely blocked up Later in the season after the hay fever period had passed, I treated the other side carefully and she has passed through the hay fever season this year without any disturbance from hay fever

In all cases of hay fever, more or less constitutional treatment is advisable, as the local disturbance has a marked effect in lowering the tone of the system, independently of the neurotic trouble with which it is frequently associated The tonics proposed by Dr Mackenzie are excellent, and I have found them of great service One thing that is of importance is nutriment to build up the system, and one of the best nutriments I have found to be eggs By breaking an egg into a glass and having the patient swallow it whole he will take from five to ten eggs or even twenty a day Many patients will be very much improved, and their attacks somewhat modified by increasing the resistance of the system to local irritation, or frequently by the employment of a sedative that will abolish to a great degree the response of the nervous system to the local irritation, but in addition to this there is in all cases some localized disease, which should be found and carefully treated Therefore, however much you treat the person generally and build up his nervous system, or however much you may improve the condi-selecof the vascular system, you must attend to the local on in the nose, be it ever so severe or ever so slight, if you wish to relieve your patient positively and permanently from hay fever

Dr S S Koser, Williamsport, Pa —I am glad to note on the part of this Section, the deprecation of the free and undue use of cocain It was only a week ago that a pharmacist of my city mentioned to me that he had regularly several customers for cocain, and added that he was quite sure that the habit was first contracted in all of them from using the tablets at home that the market is now flooded with for these nasal cases I believe the position taken this afternoon in the matter of prescribing cocain, not permitting the patient to use it at home, is wise It is a terrible thing to be the means of establishing cocain inebriety in any case In connection with this discussion, I wish to call attention to a couple of articles that have done me good service as temporizing agents in mitigating the severity of hay fever One is terebene I have certainly found it quite valuable as a mitigating agent I would also like to call attention to an old remedy, but one that has not been referred to in this discussion, and that is the inhalation of a strong solution of carbolic acid, camphor and chloroform, used in a smelling bottle

In fact, these cases come to us at such a stage that I rather prefer to palliate them first I do not believe it is good surgery to rush into an operation on the nose when the engorgement is so great, that is, I do not believe proper conditions exist for good surgical repair I would rather say it is good practice to first palliate the case and watch for one of those opportunities which the gentleman from Toronto (Dr Price Brown) referred to as the conditions present prior to developing hay fever symptoms, and to operate on the turbinates at some other time than during that attack Preeminently, in my experience, the operation that does the most good is to gently clip the lower ends of the turbinated bones, and this is more permanent This in my hands yields the most lasting benefit, and I have frequently preceded an operation with the use of the cautery, so that there might be less tendency to hemorrhage following the operation itself

The point then, I wish to make is, that in my experience, I have had better results in operative procedures if I deferred the operation until the intervals of the attack I believe, then, that the permanent results are better, the parts will heal kindlier, and in all respects will do our patient a greater good

Dr James E Logan, Kansas City, Mo —I wish to confirm Dr Roe's experience in hay fever Living in a country where hay fever is prevalent, I have seen a great many cases, but I have yet to see a case uncomplicated with hypertrophic rhinitis, or rhinitis in some form I read an article before one of our medical societies in 1886, in which I made the statement that I did not believe hay fever could exist without a previously existing rhinitis of some form, and after years of experience I am willing to support that statement to a considerable extent, for I have never seen a case where there has not been some such trouble, either from a deflected septum, exostosis, hypertrophic rhinitis, or some disease where there was a soil in which this idiosyncrasy was produced

The treatment I have used for the last few years has been the cautery I begin the cauterizations about a week previous to the first attack and continue them at intervals through the period of hay fever and by continuing these cauterizations after the period has passed, relieving whatever condition, mechanical or otherwise that existed there, and in succeeding year continuing a mild course of cauterization through the period of hay fever, I have relieved quite a number, I have recorded some cases of very pronounced recovery in this respect A lawyer, who has an office next to mine, who was a constant sufferer for sixteen years, suffering the tortures of death almost from hay fever, and had traveled the world over seeking relief, is a standing monument of the efficacy of the treatment of hay fever as I have suggested it, and to-day he has no trouble whatever from it, and there are a number of cases of a similar nature The neurotic tendency, which I believe exists in nearly every one of these cases, whether it be perceptible to the physician or the patient, is a certain latent element which must be corrected by medicinal means during the hay fever period Beginning a week previous to the attack I administer a preparation of nitrate of sodium with a half grain of camphor, continuing that six weeks after the attack has passed, I have found it to be an admirable sedative and can heartily recommend it My mother was a great sufferer from hay fever and asthma, and in 1885 I removed from her right nostril a large tumor, after which she had no trouble from hay fever or asthma until two years ago, when I found there was considerable hypertrophy existing in the left nostril, also in the right, together with a deflected septum, that by reason of my position in the family I had to refuse to operate upon About six weeks ago I removed an exostosis of considerable extent, and she writes me she has had no hay fever this season so far, and no asthma I think there is great progress yet to be made and many things to be found out in the treatment of hay fever

Dr F C Cobb, Boston —I would like to know whether, in hay fever, the writer includes vaso-motor or hyperesthetic rhinitis? I have had some cases of that kind, and although in a good many of them I could not find any very marked nasal obstruction, yet cauterization, not of a very wide area but usually over the lower turbinated and points opposite to it on the septum, which seemed to be especially hyperesthetic, appeared to give great relief, and a year later I heard from these cases that they had had very little if any hay fever But those cases which were complicated with asthma still had the asthma, there was very little relief from that These were hospital cases operated upon year before last, and they all had a great deal of trouble, some were complicated with polypi, which of course were removed But all to whom I wrote reported very little nasal trouble, so I believe that cauterization, at least to a limited extent, is of considerable value

Dr J H Bryan, Washington, D C -I think there must be two conditions or else we would not have such diametrically opposite ideas One is due to a morbid condition of the nose, which of course is relievable, but those cases in which, in the interval of attacks there is no morbid condition, I do not believe can be cured by local treatment, yet the symptoms can be greatly palliated I think in this locality we have as much hay fever as anywhere in the country, and I have seen quite a number of cases Those which have been dependent upon exostosis or pressure of the turbinated bodies have been easily relieved and have not returned, but those which are entirely neurotic in character where, in the interval of the hay fever attacks, as far as observation goes, it is impossible to see any morbid condition excited invariably return, in this part of the country, about the 15th of August I can not understand why there should be a discrepancy of opinion Dr Roe and Dr Logan are positive the condition is not due to anything but intra nasal disturbance, but I have two cases in which I think it is impossible to find anything existing in the nose in the interval of the attacks

Dr E Fletcher Ingals (Executive President), Chicago —I did not intend to say anything upon this subject, but I am so heartily in accord with the last speaker that I wish to amplify and support what he has said I have thought for a long time that where there is nothing discoverable in the nose during the interval, treatment of the nasal cavities is useless, where there is something that gives the patient discomfort, treatment of the nasal cavities may be valuable I have seen several cases where there was no hypertrophy or other form of obstruction, in which there was hyperesthesia, and in these, cauterization has been beneficial

As to the time of cauterization, my plan is to complete it at least two or three weeks before the attack is expected so as to allow the mucous membrane to become healed before the onset of the disease The cauterizations are rarely made oftener than once in five days, and each covers an area of not more than a centimeter in diameter The burn is superficial, never destroying the mucous membrane Such cauterization has an effect similar to that of a blister on the skin, and after the treatment is completed it is impossible to find cicatricial tissue In some cases where there is much swelling, deeper linear cauterizations are necessary

I do not favor removal of the turbinated bodies in the way suggested by one of the speakers, believing that it is not best to destroy so much of the mucous membrane If I wished to remove the turbinated bone I would run a trephine or burr through it, beneath the mucous membrane, thus removing enough of the bone so that the soft tissue would fall to the side of the meatus and be out of the way I have seen one case in which soothing treatment alone, carried out daily by the patient for a period of two years, prevented recurrence of the attacks I have seen one case where no topical or general treatment was employed, in which the patient, when the attack came on, by force of will never sneezed if he could possibly avoid it, and persistently refrained from blowing or wiping the nose As a result of this course he had only a slight attack the first year it was tried, and the next year practically none

I hope some of the other gentlemen will tell us what can be done by general treatment It seems to me that half of the cases can be relieved, perhaps cured, by local treatment during the interim, but if the patient comes to us after the attack has been established local treatment is not important, excepting to soothe the parts A day or two ago, a physician who has been troubled with hay fever told me that he has a rheumatic diathesis for which he has recently taken a few grains of salicylate of soda, which he feels confident is preventing him from having hay fever this season It may be that the gouty diathesis causes hay fever in some cases, the rheumatic condition in others, and I have no doubt that digestive disorders have much to do with it in some instances

For relief of hay fever that can not be prevented by local measures, I rely much upon a general tonic and sedative treatment somewhat similar to that recommended by the late Morell Mackenzie, consisting of the phosphate of brucia combined with camphor, hyoscamus, salol, and sometimes with valerianate of quinin I have used this treatment for two or three years, I think with much advantage I have the patient commence it three or four weeks before the attack is expected and continue it throughout the season

Dr John N Mackenzie, Baltimore —I have been very much interested in the discussion, and I am very much pleased that the word pollen has not occurred in the remarks made The day is dawning when we will find a solution of this problem in the study of pathologic law and not on an inquiry into the processes of plant reproduction It is difficult to disassociate the pathology of hay fever from its treatment, because the latter depends upon what is conceived of the former The pollen theory I regard as the greatest bar we have had to the march of therapeusis in this disease, and next to that I am afraid we are having another barrier set up in the too exclusive theory of the nasal nature of the malady, if we view it from the higher vantage ground of general pathology and laws of health we may catch a very much broader glimpse of the protean aspects of the problem, and be in a much better position to relieve our patients than if we follow the beaten track of the pollen theorists I certainly see cases in which there is no respiratory lesion whatever during the interregnum between the attacks When I first began to investigate this matter I was allured by the new theories concerning the disease, and for a long time was completely under their dominion, but further examination and broader conceptions of the disease have taught me the lesson that in a goodly proportion of the cases there is no appreciable local respiratory lesion whatever Another point it is not the nose alone where these lesions are found, the area in which the nerve storm breaks will depend upon the seat of the local pathologic process, for example, take a neurasthenic with a polypus in the rectum, the nervous disturbance produced by the polypus would be referred to the lower bowel whereas in the case of a polypus in the nose the impressions would be referred to the upper respiratory tract These lesions, when they do exist, as they undoubtedly do, may exist in the nose, pharynx, retro-pharynx, larynx, bronchial tubes and trachea even The point I wish to make is that the nose alone is not the only part of the respiratory tract that is responsible for the outbreaks of the disease falsely called hay fever A great deal has been said in recent years about pressure irritation, but it seems to me that instead of producing hypertrophy it is more likely to produce atrophy Take, as an illustration, cases in which the middle turbinated bone is enormously developed, as it gets larger and larger instead of producing hypertrophy of the septum it produces atrophy and goes through to the other side

Dr Cobb has brought up the question of the identity of these different forms They are all blood relations, coryza, vaso motor, hay fever, rose cold, June cold, and if we could classify them as one disease it would simplify matters very much

As to the plan of treatment my rule has always been to examine the patient, going over him from head to foot, finding out any peculiarity any disease, local or general, that might be the source of any systemic local or remote irritation They are all different like the stars, and in that way you get at a more rational plan of treatment Having done that, I look carefully after any disease, either gross or microscopic, in the respiratory passage, not in the nose alone, but all through the tract, from the tip of the nose to the bronchial tubes After having found the general condition I treat according to the circumstances of the case

Dr Ingals wishes to know about the general tonic treatment I can not give any rule I feed the nervous system, it is always broken down, you may not recognize it, as Dr Brown has said, but nevertheless there is something nervous in his constitution We not always find conspicuous nervous phenomena among hay fever patients, but there is always a nervous organization—a screw loose somewhere in the nervous mechanism I generally start out with a pill containing about one-sixteenth of a grain of phosphide of zinc, about two grains of quinia, one fourth grain of extract of nux vomica, to be taken before meals, and after meals three to five drops of Donavan's or Fowler's solution in water Very frequently I have to substitute some other nerve tonic but the main point is that the nervous system must be braced up If there be disease of the respiratory organs remove it if possible If there be no apparent disease and if upon experimental stimulation of different portions of the mucous membrane no sensitive areas are to be found let it severely alone But if on the contrary, as is frequently the case, we can localize these areas, I treat them by cauterization, and for this purpose the galvano cautery transcends all other methods We find these sensitive areas not only in the places where I have located them in the nasal passages, but also in other portions of the respiratory tract, in the posterior wall of the pharynx, in the arytenoid, commissure and the posterior wall of the trachea Why is it that the removal of a nasal polypus, for example, will dissipate hay fever permanently? The explanation it seems to me is this take an illustrative case, the patient consults his physician, perhaps suffering from violent paroxysms of sneezing, obscure cough and other symptoms referable to some reflex producing agency The patient goes on unrelieved, day after day Asthma is finally added to his symptoms, and finally he blooms out into a regular "hay fever" patient If it is summer the physician tells him he has hay fever, if it is winter he is told he has asthma At this stage of the disease a polypus is discovered and removed, and the reflex symptoms are dissipated and the patient gets well What is the explanation of that? No attention has been paid to the central nervous apparatus, simple operation work in the nose has secured the result In this class of cases the way in which the nervous system is influenced is through the constant irritation by the foreign body in the nose, the irritation of the nerve centers, the weariness they experience at being forever called upon to discharge their functions With the removal of the polypus the irritation is taken away and *physiologic rest* secured for the centers, and in that way the patient gets well If the polypus remains unrecognized, the condition goes on for years, other organs are included in the arc of reflex disturbance, changes occur in different organs which are impossible of eradication, and local treatment done will lead to temporary relief, but will not effect a permanent cure In regard to surgery, it is called for when surgery is necessary, and it is only necessary when there is something pathologic to be removed from the respiratory apparatus I omitted to make an important point, and that is that hay fever does not exist only at one time of the year, I believe it is like epilepsy—with you day and night summer and winter One of the worst cases of hay fever I ever saw was a lady in Baltimore whom I treated for four successive Januarys She never had it in any other month, it was a marked case of hay fever with asthma My plan is not to commence with a tonic at the period of attack, but I commence from six to eight weeks, sometimes three months before the expected attack and I feed the nervous system for all it is worth during that time, and I not only do that but I treat the patient throughout the year at certain intervals, depending upon the patient, the character of the case, etc I treat them during the entire year as if they were just on the verge of a paroxysm, and one of the chief difficulties I have is to follow my patients They will get apparently well, and will think, "this is all humbug, I don't feel nervous, I am not going to have a paroxysm for six or eight months and I will let the thing drop"

Dr J Bryson Delavan, New York City —The Doctor has brought out the most important point I had in mind in bringing forward this discussion, and I think it can not be too vigorously emphasized We so often see patients and physicians putting off the treatment of the disease until the attack begins The golden opportunity for treatment, according to my experience, is in the interregnum, that is, in those cases where there is present any nasal or constitutional trouble I have seen cases in which during the intervals between the attacks the nasal condition seemed to be normal, and although I have used my best endeavor to find an abnormality I have not succeeded However, we commonly have hypertrophic conditions—catarrh, exostosis, nasal polypus and various other deformities present in these cases, and these conditions persist to a greater or less degree throughout the year

We can all agree to the following propositions first, that the general condition of the patient should be kept up to the best possible limit, second, that the best opportunity for relieving the patient will be found between the attacks, when abnormal conditions of the nose should be treated, whether by surgical or therapeutic measures, to be determined by the nature of a given case, and, third, that during the attack the treatment applied should have for its prime object the alleviation of the existing symptoms

In regard to treatment during the attack I think it would not be unwise for this body to place itself on record as distinctly opposed to the indiscriminate and careless use of cocain What one of the gentlemen said with regard to this matter in his locality, might have been said I think by every one present We all find it commonly used and commonly abused, and I know that it is a source of a great deal of injury, and I wish we might go on record as opposing the evil

Finally, the fact has not been touched upon, although we all recognize it, that when we have exhausted our therapeutics and surgical means we have done all that lies in our power for the patient But if we do not succeed in relieving him we can almost invariably help him by sending him to some locality where he will enjoy immunity from his attacks I believe in this class of cases, where the patient can be sent away during the time he is having his attacks, where he can be treated between the periods of expected attacks, that in time the attacks may be entirely done away with in a large majority of instances

Dr John N Mackenzie, Baltimore—I wish to indorse what Dr Delavan has said in regard to the use of cocain I have long since given it up in the treatment of this disease, except as a purely palliative measure At a meeting of the Laryngological Association some years ago, in Detroit, I called attention to the fact, shortly after the drug was brought over to this country, that the time came sooner or later when cocain dilated the blood vessels in the mucous membrane of the throat and nasal passages, and I think that point is now perfectly well established and Dr Delavan's denunciation of its indiscriminate use is correct But there is another point not generally known, namely, the evil effect menthol sometimes produces I know of two cases in the practice of a fellow practitioner in which menthol has given rise to brain symptoms similar to those cocain produces They were both singers and had learned that a little menthol squirted into the nose with an eye dropper, just before they were going to sing would make their voices more resonant, so it had become their practice every time they were to sing to drop in a little of this seemingly harmless thing, and finally the friends of one of them noticed that she was having hallucinations and that her mind was becoming otherwise affected, This was spoken of to a physician and when she ceased taking the menthol all her bad symptoms disappeared The other case was affected in the same way and on discontinuing the use of menthol became well again

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ABUSES OF COCAIN IN NASAL TREATMENT

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY GEORGE WILKINSON, M D

OMAHA, NEB

The ability of this drug to astringe the mucous membrane of the nose and in ordinary catarrhal troubles, (namely hypertrophic conditions of the membrane) to give immediate relief, is being taken advantage of by the unscrupulous to such an extent that the matter is assuming very grave importance

That the use of these catarrhal snuffs, strongly impregnated with cocain, is the most fearful aspect of the cocain habit has no doubt been brought to the minds of many of the profession ere this The amount of the drug used in these proprietary or patented remedies is out of all proportion for their use simply for contracting the turbinate bodies, as is proven by the fact that a very few insufflations of the powder lead to an appetite and a craving, and frequently the unwitting patient is rendered a slave almost from the start to its seductive charms

This can be readily understood when consideration is given to the fact that cocain is most seductive as a narcotic to many persons, and this, coupled with the fact that it temporarily clears the head, makes it an insidious means of wreaking havoc, and the greatest recent triumph of the devil

An assay of one of these products of his Satanic Majesty gives a result something like this estimation of cocain in a powder containing bismuth, menthol, carbonate of magnesia, bicarbonate of sodium and sugar of milk Take fifty grains of the powder, put into a mortar of at least eight fluidounce capacity, fill with two drachms water, add gradually diluted muriat acid until the liquid is distinctly acid to litmus paper, avoiding loss by effervescing Stir well and pour through a small filter into a two ounce vial, rinse two to three times with a little water which is to be passed through the same filter Wash the filter with water, using just a little at a time, till the whole will be about one ounce, add one-half ounce sulphuric ether, shake for ten minutes (to remove the menthol), pour into a glass separator When the ether has separated draw off the aqueous fluid into the same vial, the ether in the separator is to be rejected Repeat the washing two to three times more, or until the menthol is removed Then render the fluid alkalin with ammonia water, shake with one half ounce ether as before After complete separation pour the aqueous fluid into the same vial The etherial fluid which contains now the cocain in solution, is to be passed through a small filter into a weighed glass breaker, capacity about one ounce Place on a water bath till the ether is evaporated Repeat the operation three or four times, then dry to constant weight and weigh as pure cocain

Thus, to every drachm of a very insoluble powder-mixture, composed mostly of bismuth, there was nearly three grains of hydrochlorate of cocain When it is taken into consideration, that in a number of instances your essayist found that the dose of these snuffs being taken ad libitum, and consequently users of the same are found to habitually have used as much as two to three ounces per nasi, or forty and sixty grains a day in this manner, there is surely time for a halt to be called by the interference of the law

I propose in this paper to give a general sketch from a study by personal contact with a colony of cocain habitués in the city of Omaha, all instituted by the use of one preparation highly advertised as a snuff and a cure for catarrh

It is not every one of these who have found it difficult to break off from using the drug, indeed, many claim, although they were using thirty and forty grains a day, and that as soon as the nature of the remedy became known to them, that they easily stopped abruptly But the result in the end is by no means always so happy as this and, to quote Shay "Once a man flies to cocain for relief from cares that annoy, he generally continues with such rapid strides toward such complete subjugation to its bewitching thralldom, as but few will ever be rescued from by any power of will which they may be able to bring to their aid," has been in some of the cases referred to well exemplified It is not necessary for me to dwell upon the toxic symptoms more than to point out two primary effects of the drug when used as a snuff The craving for it is simply pitiful, the habitue will have it about him at all hazards He carries it about in his pockets, and the effect is so temporary and seems so unsatisfying that he is continually snuffing it, and in many cases he soon learns that he can get better results by taking it on his tongue and thus he begins to eat it The first annoying symptom which these people complain of is insomnia, and here for the first time they realize the pernicious nature of the habit they are forming

The attempt to break off in the most instances begins at this time, and the success or defeat is simply a repetition comparable to the same experience in the habit of drink To dwell further on cocainism is beyond my theme What I desire to specifically dwell upon and from an experience with those who have been led into the cocain habit by its use in nasal catarrh is this how far should we be allowed to go in placing in the hands of patients the cocain spray? What quantity is safe and yet effective? My experience is that, absorbed by the nasal mucous membrane, in the quantities which we might use there is no danger, yet we must always remember that it is not always the quantity but the susceptibility of the patient Some people will soon learn, if not already told, what the drug is and the hint is enough for them to increase the dose It is the old story of the physician's liability for instituting the habit, as with morphin

RHINITIS ATROPHICA FETIDA (OZENA GENUINA)

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY O M WATERMAN, M D

MILWAUKEE WIS

LATE ASSISTANT TO PROF JOHANN SCHNITZLER OF VIENNA

The years from 1878 to 1888 having been remarkably fertile in the contributions of specialists to the subject of rhinitis atrophica fetida, commonly called ozena, the diligent observer is surprised to note how little has been written since that time about this not uncommon disease After reviewing the articles from every standpoint, we come to the conclusion that the knowledge we possess of the etiology, as well as of the therapy, of the disease is a very uncertain one Notwithstanding the abundance of material, scarcely two observers have come to the same conclusion, and the very praise of the different curative methods and medicinal agents now in vogue, none of which, however have proved unquestionably successful, show the impotence of our present mode of treating the disease Such facts are certainly discouraging, but those afflicted with ozena are so deserving of pity that new investigations, conducive to finding a cure for the trouble, are as much to be desired as they are necessary

The views in regard to the character of the disease are widely differing, and while some maintain that rhinitis atrophica fetida is a condition consequent upon a simple atrophic rhinitis, others contend it is a morbus sui generis, and still many others hold that the predecessor of an atrophic rhinitis is always a hypertrophic one The latter theory seems to be the one most acceptable, as I shall endeavor to show in the following pages The opinions as to the constitutional character of the ailment differ also very materially, and while a number of pathologists distinguish only three ozena tuberculosa, ozena scrofulosa and ozena luetica, (Seiffert of Wurzburg cites one hundred cases, collected by him, in which no constitutional anomalies could be detected, the majority of this number being persons of excellent general health), others, trustworthy observers like Schech and Biesgen, claim that dyscrasia and scrofulosis would beyond doubt be etiological factors, and Schech says he has never seen an otherwise healthy individual afflicted with ozena To refute Schech's claim is hardly possible, in view of the fact that only a very small fraction of humanity can be considered absolutely healthy

The literature from an anatomical standpoint is rather meager, the most explicit being the monograph of Zuckerkandl, "Normal and Pathological Anatomy of the Nose and its Pneumatic Appendices" He also presents the view that the atrophy of the mucous membrane and the turbinated bones is always preceded by a hypertrophic condition (Polypose Wucherung) and that in the atrophy following, that of the bones is prevailing He distinguishes different stages of atrophy, in the mildest of which only the turbinated bones appear thinner and more fragile, secondarily the size of the bone is reduced, and the free edge is no longer convex but plane or even concave, until, finally, of the bones so attacked, only a small projection remains The external nasal walls are also affected by this atrophy, and frequently become so thin that the canalis palatinus descendens and the lacrymal nasal duct disappear The nasal cavity gains so in size that in many cases the sphenoidal cavity, as well as the foramina ethmoidalia are visible Zuckerkandl remarks further on the change of the fibers of the olfactory nerve that the lamella of the ethmoidalis is shortened, which is very important, as this lamella carries the branches of the olfactory nerve He and Frankel are of the opinion that rhinitis atrophica fetida is the sequel of a hypertrophic nasal catarrh, and as an indisputable proof he, Zuckerkandl, calls attention to the nine drawings in his book, all of cases where, in addition to atrophic changes, hypertrophic parts such as polyps or polypoid degeneration could be seen

The findings of postmortem examinations made by E Frankel corroborate Zuckerkandl's opinion. Neither of these two give any clinical data, but Seiffert at the International Medical Congress at Berlin had a report of cases where he dissected parts of the turbinated bones with mucous membrane, from living subjects, and examined the same under the microscope He defines two varieties of cases, those of simple rhinitis atrophica without fetor, and those of rhinitis atrophica fetida In the former, he reports that the cylinder epithelium was sometimes intact, sometimes it was changed to different layers of cubic epithelium, change into pavement epithelium he found in none of these cases The sub-epithelial layers showed considerable infiltration of the cells. The condition of the secretory glands in some cases presented a normal appearance, in others they were infiltrated, and in still other cases the number of the glands was reduced. The increase in the connective tissue was so large that the degree of the atrophic change could be judged thereby. In the cases of the second class the microscopic examination gives quite a different result. In the cases only *slightly affected, the cylinder epithelium was partly* infiltrated with new cells, there were also present many layered pavement epithelium with a horny condition of the upper layers. In the severe cases the cylinder epithelium was entirely gone, and only pavement epithelium with a horny surface existed. Glands and connective tissue were degenerated or infiltrated. Of the blood vessels the veins were often considerably enlarged. Regarding the fetor, he thinks *that the degeneration of the dead pavement epithelium is the most important factor* causing it, micro organisms being only of secondary importance. Schuchardt sees the cause of ozena in the change of the ciliary epithelium of the nasal mucous membrane into pavement epithelium. He remarks that in a catarrhal condition of the ear, and also of the uterus, a transformation of the epithelium into pavement epithelium occurs and in consequence a fetor makes its appearance, quite similar to the one in *ozena*. Berliner came to another conclusion in regard to the etiology of ozena. He thinks the primary cause of the disease is the hypertrophic middle turbinated bone pressing against the septum, producing thereby stagnation of the secretion and successive atrophy of the mucous membrane. The fetor, Berliner thinks, is caused by the contact of the stagnated secretion with the atmospheric air and its microorganisms. H. Krause found the intima and E. Frankel the adventitia of the nasal arteries obliterated. Moldenhauer claims that ozena is caused by the degeneration of the blood vessels supplying the nose. Zaufal thinks ozena is the result of a congenital malformation in the turbinated bones. I, myself, found in a microscopic examination of pieces of mucous membrane, taken from patients of the "Allgemeine Wiener Poliklinik," that the ciliated epithelium had undergone a change into layered pavement epithelium, and here and there a cylinder epithelium could be detected. Fibrillary connective tissue was abundant and also accumulations of cells, which contained fat corpuscles. In all probability these were cells of the mucous membrane, fatty degenerated. I found a moderate number of leucocytes.

I might mention here, the excellent article of Dr. M. Hajek, which deals with the miroorganisms of the nose. Among others he describes especially one, of which he made cultures. These bacilli ozenæ Hajeki emitted a penetrating fetid odor, similar to genuine ozena. Hajek himself, however, does not believe that this bacillus is the sole agent producing the fetor. Inoculation experiments gave a negative result.

Passing over now to the clinical analysis of the symptoms of the different stages of ozena, I found in but slightly affected cases, comprising *the first* stage of the disease, that only the mucous membrane of the inferior turbinated bone and the tissue intimately connected with it appeared atrophic, while the middle turbinated presented a hypertrophic condition. Crusts were abundant, especially in the posterior part, and the fetor was sometimes so intense, that full six hours after the examination of a patient it was still attached to my clothes. The mucous membrane is very much inclined to small hemorrhages and excoriations are quite frequently to be found. The patients complain of a dull heavy feeling in the head, and loss of smell, though both symptoms may be more or less wanting. Dryness in the nose and naso-pharynx are never missed, and *in all cases* the crusts cover in a measure the posterior walls of the pharynx. Examination with the probe shows that in this stage of the ailment, the already altered mucous membrane is tightly attached to the bone, which is itself not yet atrophied to any considerable extent.

After longer or shorter intervals follows the second stage, the pronounced atrophy of all parts affected. The inferior turbinated bone is now changed into a small glittering band and the middle turbinated is also much reduced in size. The whole nasal cavity is covered with greenish gray crusts, frequently mixed with blood, and on the posterior walls the *condition* is the worst. The sense of smell has entirely disappeared and the dryness is very disagreeable to the patient. The crusts reaching into the naso pharynx keep up a constant irritation and especially in the morning an ardent desire to vomit is present. Because of the disgusting fetor the sufferer is shunned by society, and thus often the hope and ambition of the person afflicted is destroyed, so that a secondary psychical influence is of no rare occurrence, and melancholia and its consequences have been not infrequently observed in those suffering from ozena. It is worthy of remark that the disease attacks preferably the female sex. In seventy cases *treated under* my supervision, there were sixty eight women and *only two men*. *Considering* this, and the result arrived at by Jurasz, that ozena patients exhibit a much stronger fetor during the time of menstruation, and further that in a large percentage of women suffering from ozena, catarrhal conditions of the sexual organs exist, we come easily to the conclusion that some relationship exists between the mucous membrane of the nose and that of the sexual organs.

How far the alteration of the ciliary epithelium into pavement epithlium is *responsible* for *the* creation of the fetor, I shall try to establish. A special agent creating the fetor I believe does not exist, the latter is rather the symptom of certain diseased conditions, and only under such circumstances does it appear reasonable that pathologists should speak and distinguish between ozena scrofulosa, ozena tuberculosa and ozena syphilitica, in other words, inflammation of certain parts of the nose upon a scrofulous, tuberculous or syphilitic basis. All these conditions are followed by ulcerative processes which in turn produce the putrid fetid crusts.

Somewhat different is ozena genuina, or rhinitis atrophica fetida. There is nothing remarkable about the hypertrophy, now well recognized as the first symptom.

Hypertrophic conditions of the turbinated *bones* of the nose are very frequent, and might exist for many years without any change for the better or worse. But in ozena genuina, atrophy, the second stage, soon appears, and the question naturally arises, Why does this change from hypertrophy occur only in certain individuals? The explanation is, I believe, that in certain individuals, loci minoris resistenciæ exist which give a disposition to atrophic conditions The case of the atrophy itself would be found in neurotrophic disturbances, which influence successively the different parts of the nose Whether this degenerative process of nerve fibers exists during the hypertrophic stage, or occurs afterwards, is an open question for the present

The first effect of the degeneration is manifested in the epithelium of the mucous membrane, the normal ciliary epithelium is changed into pavement epithelium and the glands which lack their necessary nourishment, undergo, in a great measure, a fatty degeneration The nerve fibers of nervus profundus petrosus major, belonging to the sympaticus, share in the degeneration, which explains the vaso-motoric disturbances of which Frankel, Krause and Moldenhauer make mention At length the bony part, not properly nourished by the blood vessels tributary to them, participates in the atrophic condition Some one might ask here why all secretory glands do not become fatty degenerated or infiltrated, but S Meyer proved in 1881 that certain nerve fibers in the peripheric system, having once perished, are regenerated, a fact which might well be considered in the premises The sensory fibers supplying the nose belong to the trigeminus, and it is well known that after resecting them, the greatest trophic alterations have taken place resulting in inflammation and atrophy of all parts supplied by the respective nerve branch Naturally the anastomosis between sympaticus and trigeminus plays an important part, as the peculiar riches in venous blood vessels of the mucous membrane of the nose is known, and that in rhinitis atrophica fetida the sense of touch is very much impaired all observers agree

The pathologic secretion and its fetid order can likewise be easily explained in connection with the foregoing The normal mucous membrane has, as has been said, undergone a process of degeneration, and by this process the ciliary epithelium was changed into pavement epithelium which covers the newly produced connective tissue The pavement epithelium is unable to keep in a fluid condition the highly albuminous secretion which comes from the intact glands, it must have the effect of a foreign body on the pavement epithelium it must irritate the same and dry upon it and disintegrate, coming as it does in contact with the external air and the microorganisms contained therein The microorganisms have, as producers of the fetor, a secondary importance, a primary influence which Loewenberg believes they have is out of question

Considering now the therapy of ozena genuina, I must say that a specific remedy for its cure does not exist, new remedies, greatly praised, sporadically make their appearance, but as quickly are abandoned The cauterizing in this disease with chemicals as well as with the galvano-cautery is wholly to be condemned, although it is still practiced in a good many instances, for by cauterizing the surface we can not expect to revive an atrophied mucous membrane, on the contrary, only the remaining parts, which act normally, are destroyed, and we create in their place a cicatrized connective tissue

Two fundamental principles have to guide us in our therapeutical efforts 1, the indicatio causalis, 2, the indicatio symptomatica To satisfy the former, we have to look for a constitutional anomaly, and if such is found in the form of anemia, scrofulosis, etc , it has to be corrected by internal medication with iron, iodin, arsenic or cod-liver oil, a change of air, or a suitable watering place is to be recommended Attention must be paid to catarrhal conditions of the sexual organs of women, and such ought to be included in the treatment The importance of constitutional treatment is easily recognized, if we consider that in cases where the mucous membrane is still partly intact the improvement in the physical condition, the richer condition of the blood, etc , will exert their influence upon nerve and other tissues to stimulate them anew

The indicatio symptomatica must fulfill two conditions 1, the removal of all old crusts and the prevention of the formation of new ones, 2, the removal of the fetor Both conditions are intimately connected, but the majority of all medicinal curative agents considers the removal of the fetor, and that seems but natural, as the patient, whose sense of touch is very much impaired prays the physician to destroy the bad smell, everything else being of no paramount importance to him

The remedies principally tried are those of the order of disinfectants, and every one has been tried carbolic acid, sublimate, salycylic acid, creolin, boracic acid, resorcin, iodoform, thymol and lysol, they all and many more have been used, but all with the same success, that is, with none Some prescribed medication in powder form, others in solution, and still others preferred the insertion of medicated nasal bougies, yet I do not believe that a single caesof genuine ozena has been cured by the application of these remedies alone Irrigations or the nasal cavities with disinfecting fluids might be used with advantage for disinfecting purposes, but they ought to be performed by the physician himself, as middle ear inflammations are not a rare occurrence if the instrument is used by unskilled hands I have never observed that larger crusts could be dislodged by the use of the nasal douche or syringe, I always prefer an instrument called "Kornzange" Without any trouble I cleanse the nose of all crusts and, after having done this wipe the whole nasal cavity with a cotton tampon impregnated with a mild disinfectant fluid This has to be done cautiously and without rubbing the mucous surface, in order to avoid bleeding or injuries to the mucous membrane After the nose has been made dry, the second part of the treatment is attended to This is the vibratory massage of the mucous membrane

The first to try practically and advocate massage of the mucous membrane of the respiratory organs was Kelgren in 1888, although Heider in 1853 in a monograph, "Vibration as a Remedy and Diagnosticum," mentioned it After Kelgren it was M Braun who called special attention to massage of the mucous membrane, as a remedy in all diseases of the respiratory organs Lately Laker has described massage of the mucous membrane as a panacea for all diseases of the nose, pharynx and larynx, and claims to have made very remarkable cures with it My own experience has not been so elating, as I have *always been taught by it that an atrophic mucous* membrane could never be changed into a normal condition, but where the atrophying process is not too far advanced, I must acknowledge that vibratory massage is the only rational treatment By means of the short vibratory movements, those parts of the mucous membrane which have a tendency to atrophy receive fresh stimulation, a further progress of the atrophic conditions is prevented, and the result is that the remaining healthy parts suffice to supply the secretory glands, keeping them intact

The method of performing vibratory massage is very simple A small cotton tampon, impregnated with disinfecting and, at the same time stimulating solution, is fastened to the end of a flexible silver probe conducted into the nose, and vibratory movements coming from the biceps muscles of the right arm, should strike every part of the nasal cavity to be reached Care must be taken not to injure the mucous membrane, so as to avoid bleeding and consecutive excoriations Every treatment ought to last from two to three minutes and must be repeated daily at least from four to six weeks, after which time it might be performed every second or third day Until recently two formulæ have been used for the treatment of ozena patients at the "Wiener Allgemeine Poliklinik," the first,

Iodi puri	0 4
Kali jodati	2 0
Glycerini	15 0

The other, Peruvian balm, in diluted condition If either of the medicines was used alone the result was unsatisfactory, but with vibratory massage at the same time it was in a number of cases very encouraging Some time last February I thought I would try a chemic product, peroxid of hydrogen, H^2O^2, used in America to clean out pus cavities, and I selected ten cases of rhinitis atrophica fetida for such trial The history of these ten cases, eight of which exhibited good results (in the remaining two the remedy had to be discontinued by the direct wish of the patient), shows that further experiments in this direction are in order I may mention here, that the treating physician has to pay attention to the quality of the peroxid of hydrogen The preparation to be used has to contain ten volumes of H^2O^2 equal to three weights With this solution, the cotton on the end of the probe should be impregnated, and the massage performed, and then the surface brushed slightly with

Sol hydrogenii superoxid	20 0
Albolini puri	5 0

The physiologic action of the remedy fulfills the requirement in both respects, firstly it is a mild disinfectant and microbe destroyer, and secondly it stimulates the mucous membrane without irritating it After a certain term of daily treatment as described above, the patient might be prescribed an etheric oil like ol terebint, ol citr, or ol bergamott, of which he should put 5 drops in about a pint of hot water, cover the top of the vessel with a cloth, leaving only sufficient space for his face, and now inhale the ethereal oil energetically through his nose Three times at intervals of five minutes each the oil should be added to the hot water, so that altogether 15 to 20 drops are used at each sitting To repeat this procedure morning and evening suffices This method is indicated, as ethereal oils set free H^2O^2 The patients willingly undergo this treatment, as it is agreeable and can be done at home In harmony with the aforesaid, a faradic brush might be useful, but I have never tried it in my practice.

The following is the history of some of the cases treated according to the above described method

Case 1—Anna K, 18 years old, saleswoman, presented herself Feb 4, 1892, for treatment of the nose Patient had suffered for two years For eighteen months she could not breathe through her nose, had pain in the temporal region changing from right to left now and then, these pains being constant, sometimes extended to the occipital region For over a year the sense of smell was reduced, resulting after six months in complete anosmia Since that time patient was able to breathe through her nose and only the bad smell, of which those surrounding her complained, compelled her to seek medical aid Patient had menstruated pretty regularly for twenty one months, the menstruation lasting two to three days Examination patient made the impression of a chlorotic individual Physical examination of heart and lungs negative The nostrils were not as large as usually found in ozena patients The mucous membrane was covered with immense crusts, reaching from the apertura pyriformis to the choanæ Great fetor The lower turbinated right, as well as the left, was atrophic, the middle turbinated bone moderately hypertrophic The mucous membrane was very fragile and had a tendency to bleed Treatment removal of crusts with "Kornzange," vibratory massage, tampons impregnated with iodin glycerin solution After two months' treatment no noticeable change After that, treatment with hydrogenium superoxidatum, as described Two months later hardly any formation of crusts, the fetor considerably diminished and only at long intervals noticeable Patient felt in every respect better and her sense of smell was very much improved

Case 2—Theresa Z, dressmaker, 42 years old has had nasal trouble, to her recollection, for eight years Sometimes unable to breathe through her nose She could smell fairly well Physical examination of heart and lungs negative Examination of nose showed atrophic condition of the right lower turbinated bone, of which only a small projection remained, nearly the same on the left side Middle turbinated hypertrophied more on the right than on the left Large crusts from the anterior part of the nasal cavity to the posterior Fetor very pronounced Patient had since her first visit, been treated with peroxid of hydrogen as described, and after five days of daily treatments was so much improved that she presented herself only once or twice a week for inspection and treatment This patient suffered from headache and palpitation of the heart Both have disappeared She had also a purulent blennorrhea, which improved since her nasal trouble got better The mucous membrane in the naso-pharynx was moderately atrophic and patient complained of dryness and constant irritation Here, also, vibratory massage and local applications of H^2O^2 mixed with 25 per cent glycerin improved the condition Internally sol Fowleri

Case 3—Anna T, domestic, very anemic person, suffering for three years back from nasal trouble and neuralgia in frontal portion of her head, felt very weak and had spells of melancholia, she was unhappy because of the bad odor she emitted, she could not retain any position The nasal examination showed atrophic surfaces of the mucous membrane, and here and there small hypertrophics were apparent The interior parts of the nose were covered, like wall paper, with green and brown crusts extending into the pharynx The fetor was horrible Patient showed atrophy in lower and middle turbinated bones in a moderate degree She was anosmic This girl had been treated for six months by application with diluted Peruvian balm without apparent change, when I concluded to use peroxid of hydrogen and vibratory massage After a daily treatment of two months, patient was better in every respect, even her mental condition was improved The anemic condition was corrected by internal medication arsenic in the form of Fowler's solution, and lactate of iron having been prescribed

Case 4—H W, private, 18 years, very robust looking, had suffered from ozena for two years Examination of the nose revealed the typical picture of the disease, the inferior turbinated were atrophic, the middle hypertrophic Headache and anosmia not present Patient had been treated with different remedies without satisfaction For one week she was treated with H^2O^2 She claimed she felt no improvement and asked the physician in attendance to revert to iodin glycerin solution, with which she had been treated before

Case 5—Marie T 19 years, private, suffering with what she termed *chronic catarrh*, three years ago became gradually anosmic and has nearly constant headache in the frontal region, also frequent attacks of palpitatio cordis Examination of heart and lungs negative Menstruates since two years, but only one to two days' duration each time Fluor albus Neither conjunctiva nor gums appeared chlorotic The people coming in contact with her had been complaining for five months of her smelling badly Examination showed genuine ozena in moderate degree After two months' treatment with hydrogenium superoxidatum, crusts and fetor had disappeared the mucous membrane showed a nearly normal condition and the secretion, though thick, nevertheless, was liquid Patient then came only once a week and used at home ol citri, as described in the foregoing Headache and palpitation were much better and she could smell nearly as well as before she had the trouble

Of the remaining five cases, four showed marked improvement under the vibratory massage treatment, combined with peroxid of hydrogen applications, one case did not yield and the patient abandoned the treatment after two weeks' trial

Summing up everything brought forward we come to the conclusion that

1 Our knowledge of the etiology of genuine ozena is quite incomplete, and none of the hypotheses offered can be accepted unconditionally

2 A so-called ozena syphilitica, ozena tuberculosa or ozena scrofulosa can not be brought into the same category with ozena genuina

3 While the atrophy in ozena genuina is preceded by a hypertrophic condition this hypertrophy is not the ordinary rhinitis hypertrophica chronica

4 The cause of rhinitis atrophica fetida is neurotrophic alterations of certain peripheral nerve ends, sensitive and vaso-motoric

5 The formation of crusts is caused by the change of ciliated cylinder epithelium into pavement epithelium, after the secretory glands have suffered by neurotrophic disturbances

6 The origin of the fetor is to be found in the disintegration of the strongly albuminous secretion, which is exposed to the microorganism in the atmospheric air, the secretion acting as a foreign body on the altered mucous membrane

7 No therapeutic attempt to cure rhinitis atrophica fetida is considered absolutely successful, but cauterizations are to be condemned

8 The leading principle in treating the disease is vibratory massage, this promising the best results obtainable

9 Peroxid of hydrogen is strongly recommended as a remedy at once stimulant, disinfectant and nonirritant

10, 11 Loan Trust Building

OPERATIONS ON THE NASAL SEPTUM

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY H HOLBROOK CURTIS, M D

NEW YORK, N Y

It was not my intention to dignify these observations with the name of a paper, I would prefer to call it an outline sketch to elicit a discussion upon a subject of interest to the Section

If an experience of over two thousand cases of operation upon deviated septa constitutes a sufficient apology for my remarks I beg leave to make a few suggestions as to the modus operandi

The questions one asks before operating, are

1 Is the patient a bleeder, or is there a family history of hemophilia?

2 What is the condition of the patient's blood?

3 Is there a suitable reason for operating?

4 Does a gouty diathesis exist, or has the patient a secondary syphilis?

5 Is albumen present in the urine?

If the patient is a hemophile, the septum should not be touched if it can be avoided

In no other locality of the body is persistent hemorrhage more difficult to control If there is a question as to the blood state, the hematoscope or hematometer will settle it at once Never operate in a case where there is shown to be less than 7 per cent of oxyhemoglobin in the blood We see many people who get along in comparative comfort through life with badly deflected septa We should not interfere with a deflection unless there are reflex or direct troubles arising from the stenosis produced Amongst these we may casually mention, chronic conjunctivitis, occlusion of the nasal duct, etc, or the induced respiratory affections as, chronic pharyngitis, laryngitis, trachitis, bronchitis, etc, or aural complications as, Eustachian catarrh, chronic otitis media, tinnitus and the like In young persons the relief of a nasal stenosis is often an important factor in the cure of a long existing anemia, while in pulmonary affections, ofttimes including phthisis, the restored nasal respiration is frequently the beginning of a permanent cure Ten years ago these views would have been considered empirical To-day they stand as established facts, as undeniable as the axioms of geometry

In secondary syphilis we must be careful not to operate until we are sure of healthy granulation tissue

In three cases we have seen a severe attack of gout develop within three days after a septal operation on a gouty subject In neither of which cases had there been an acute attack for several months In diabetic patients and in Bright's disease, the severity of the constitutional symptoms must be taken into consideration, as well as the actual blood state

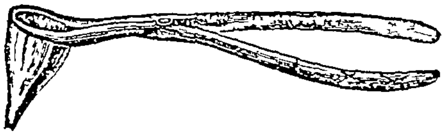
Having decided that an operation is necessary, we may consider for a moment the preparatory and after treatment, as well as the manner of operating

The necessity of treatment with a view of making a nostril aseptic is problematical, to say the least, for in nearly every case where trouble enough is being caused by the stenosis to warrant an operation, the accessory sinuses are continually giving off secretions laden with microbes which keep the nasal chambers in a more or less septic condition In cases where a purulent ethmoidal discharge is present, we need not be deterred from operating on account of the presence of unhealthy pus, for experience shows that the nostril becomes so habituated, so to speak, to the poisonous surroundings that the wound is not apt to become infected My experience in this has been authenticated by several observers with whom I have communicated on the subject

Turbinate hypertrophies causing pressure, and erectile tissues should be treated before operation in order to enlarge the air space The general health should be looked after and the blood put in as healthy condition as possible by internal exhibition of iron Should we wish to remove a septal ridge for example, immediately before operating we use an antiseptic wash freely, then apply a thin layer of absorbent cotton, wet with a 10 per cent muriate of cocain solution over the ridge, so that every part of the tissue to be removed is covered, we then allow the patient to wait for at least fifteen minutes before operating In this way the least constitutiona effect from the cocain is obtained and the most complete anesthesia The wad may be molded over the deflection by means of a flat wire applicator Such an applicator as is used for applying chromic or trichloracetic acid, which may be easily made by hammering flat the last inch of an eight inch length of No 14 copper wire This wire fits in the handle of the ordinary laryngoscopic mirror, and may be put to various uses

When ready for operation remove the wad, again spray the nostril with antiseptic solution, and by means of the flat probe bent conveniently at the end ascertain the depth of the ridge

Usually the ridges are oblique ascending, according to the writer's classification[1] Fix in your mind the direction of the floor of the nasal cavity Operate from below upward in order that bleeding may not obscure the field If a trephine is used, always steady the head by the left hand, using a speculum in which the trephines will fit the groove of the lower lip, and never use a trephine with a lateral opening in the barrel The opening for cleansing purposes should be behind the shoulder to prevent all possible jumping



Curtis Nasal Speculum Modification of Kramer s Aural

The Writer's Trephine

In using a saw begin, if possible, from below and saw upward The trephine leaves as flat a surface as the saw, provided the operator has sufficient skill in the use of the speculum as a guide—for by conjoined manipulation the surface may be *planed* perfectly smooth

In case of profuse bleeding do not complete the operation until the first hemorrhage ceases, for in only rare cases does it come from but a single point, and the temporary plugging of the track of the trephine is a simple procedure In ordinary bleeding the operation should be completed at once

After the deflection is removed, allow the patient to hold the head over a basin, breathing through the mouth until the bleeding ceases Try to preserve a clot over the wound, not washing afterwards, but carefully removing the blood from the floor in order to allow air to pass through the nostril, carefully preserving the blood clot Usually in thirty minutes this is readily accomplished Then blow a little aristol over the wound and direct the patient to remain perfectly quiet for a half hour Never, if possible, leave any foreign body or plug in the nostril as a source of infection Don't blow the nose for five hours, and then only gently The following day direct the nostril to be sprayed four times, or every three hours with Dobell's or other antiseptic solution, and if possible covered with aristol Too much fussing after operation is to be condemned The best results are found in patients who go into the country the day after operation and have very little after treatment

The great bugbear of nasal surgery is the possibility of hemorrhage, and in the treatment of hemorrhage the skill of the surgeon comes into play My observations have led me to the following rules for controlling the same

1 Find the bleeding point

2 Introduce absorbent cotton, dusted with Monsel's salt, above the seat of bleeding Then make downward forcible pressure with a straight Wagner sound against the floor of the nostril, to include laterally the bleeding vessel, if the bleeding is not controlled, pack with absorbent cotton upward, making pressure of the pack between the septum and middle turbinate to obtain pressure on vessels coming from above

3 If bleeding resists these anterior packs, apply shawl straps about the thighs at the perineum, and small ropes or rubber tubing about the arms at the axilla and draw up tightly, though not tight enough to interfere with the arterial supply, our object being to stop the venous return This will usually stop the hemorrhage within two minutes Care must be taken when each extremity becomes cyanosed and mottled, to loosen its strap gradually, and when relieved, tighten it up again, keeping one arm and one leg strapped, while the others are being relieved in this manner By means of this simple method the awful results of post-nasal plugging may be avoided Since devising this means I have never had to employ the post-nasal plug

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A NEW PATHOLOGY AND TREATMENT OF NERVOUS CATARRH

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

BY SETH SCOTT BISHOP, M D

CHICAGO

An excess of uric acid in the blood causes nervous catarrh (hay fever) Attacks can be stopped, by precipitating the excess of uric acid from the blood by rendering the latter less alkalin with an acid treatment Attacks can be prevented, by reducing the amount of uric acid in the body to the normal, and maintaining it there

Uric acid exists in the blood in the proportion of about 1 to 33 of urea in health When this proportion is disturbed by a relative increase of the uric acid, certain disturbances of a vascular and neurotic character arise The effects of uric acid in producing these disturbances have been the subject of an extensive and interesting series of experiments by Alexander Haig For years he was a sufferer from migraine, and studied in his own person the relation of uric acid to the production of attacks of this disease, and the effects of anti-uric acid treatment in subduing attacks, and of diet in preventing them I desire at the outset to acknowledge my great indebtedness to this painstaking observer for many of the facts adduced in this paper

First, let us consider what the effects of an excess of uric acid in the blood are The disorders of the nervous system, that Murchison associated with lithemia are aching pains in the limbs, and lassitude, pain in the shoulder, hepatic neuralgia, severe cramps in legs, headache, vertigo and temporary dimness of vision, convulsions, paralysis, noises in ears, sleeplessness, depression of spirits, irritability of temper, cerebral symptoms and typhoid state

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[1] See Nasal Stenosis, Rep 9, International Medical Congress

Haig maintains that the presence of uric acid in excess accounts for the exacerbation of pains in rheumatism and gout, and he even contends that these diseases are primarily due to the action of this acid on the brain, the spinal cord, or the solar plexus of nerves In persons suffering from intense pruritus, uric acid and the urates have been found in excess

Ebstein believes that uric acid deposition acts as an excitor of inflammation in the tissues in which it is deposited

Quinquaud studied the effects of uric acid on the skin He administered three to six grains a day to the human subject The most common results were boils, and patches resembling eczema, the dermal analogue of coryza

Thomas J Mays attributes attacks of angina pectoris to "the increased formation of uric acid, which is incidental to the gouty and rheumatic diathesis" He agrees with Haig in attributing migraine to the irritating effects of uric acid

Conklin details a number of well-marked cases of nervous, mental, nephritic and other diseases, that support the proposition that they are the result of the action of uric acid

N S Davis, and others, add the following to the list of manifestations of uricacidemia loss of appetite, nausea and vomiting, flatulent indigestion, diarrhea, intense itching, asthma, blindness, deafness, numbness of the skin, and creeping sensations, hyperesthesia and pain in the skin, impaired memory, melancholia, delirium, epilepsy and coma

Observe the symptoms of uric acid irritation that are closely allied to paroxysms of nervous catarrh asthma, intense itching, over-sensitiveness, and other nervous disturbances of the skin, neuralgia, sick headache, irritability of temper, etc The first three symptoms often characterize attacks of nervous catarrh, and highly moral persons, like the late Henry Ward Beecher, are seized with an almost irresistible impulse to accompany their storms of sneezing with a shower of profanity Sick headache sometimes alternates with these attacks, and at other times takes the place of them

While suffering from migraine, Haig found the uric acid increased to the proportion of 1 in 20 or 25 of urea, whereas before and after attacks he found it as 1 to 40, and the headache was proportioned to the excess of uric acid over the urea, and not to the amount of alkali used to bring the uric acid out The mental condition varied directly with the relative amount of uric acid in the urine The excretion of the acid was greatly diminished before the attacks, i e, during mental exaltation

I have learned while writing this paper, that Leflaive analyzed the urine before and during attacks of hay fever, and found uric acid in great quantity just before the attack, and half that quantity during the attack Some of this may have been washed out of the system through the profuse perspiration that occurs during the violent sneezing

Haig says "Uric acid in the blood contracts the arterioles and capillaries all over the body, producing the cold surface and extremities, raising tension of pulse and, according to Marcy's law, that pulse rate varies inversely as the arterial tension, slowing the heart Headache is a local vascular effect of the uric acid Excretion of this acid may even explain the mental depression and irritability, and their results in the excess of suicides and murder in July There is an excessive excretion of this acid in the warm months, and a minus excretion in cold weather During plus excretion there will be high arterial tension with anemia of the brain, bad temper, etc At this time a dose of acid would free the brain circulation from the power of the uric acid and produce, as Roy and Sherrington have shown, an increase in its size, and a free flow of blood in its vessels"

Peiper says that alkalescence of the blood is diminished in all fevers Corroborative of this, Haig found during an attack of influenza in 1890, that there was a rise in the acidity of his blood, urine and tissue fluids, thus driving the uric acid out of these fluids, diminishing its excretion and causing its retention in the body

Bertillon says that suicides increased 40 per cent in France after the influenza epidemic This may be accounted for by the accumulation of uric acid in the body during the diminished alkalinity of the blood, and when the blood regained its normal alkalinity the stored acid was taken into the circulation and produced its characteristic irritability and depressing effects

In health, about five to eight grains of uric aci are secreted every twenty-four hours, and it is readily soluble in the blood, which is slightly alkalin If there is increased formation of this acid no harm results, so long as it is promptly eliminated and the ratio between it and the urea is not disturbed

Haig found that by diminishing the alkalinity of the blood he freed it from uric acid, relaxed the arterioles, relieved headache and mental depression Increasing the alkalinity, increased the acid excretion, contracted the arterioles, slowed the circulation of the blood and caused languor, depression, headache and, in epileptics, a fit Epilepsy, migraine, spasmodic asthma, etc, are, like neurotic catarrh, functional nervous diseases What Haig says concerning epilepsy and migraine may be affirmed of asthma and nervous catarrh "They may come o early in life, last for years, or the whole of life, cer to recur at more or less regular intervals, are me with in members of the same family, may afflict one and the same patient—now a fit, now a headache—alternating or together Epilepsy and headache, gout and rheumatism are very commonly met with in the same family"

Broadbent thinks that the convulsions of epilepsy are brought on by the slowing of the circulation, and consequent cerebral anemia, in the same way as convulsions after great hemorrhage As we have seen, the effect of an excess of uric acid in the blood vessels is to contract them, which, in the vessels of the brain, produces cerebral anemia This condition appears to obtain in nervous catarrh, and the attacks are relieved by such remedies as nitrite of amyl, etc, which relieve anemia of the brain

This uric acid theory of nervous catarrh is no antagonistic to the present status of medical opinio or surgical treatment, but on the contrary, explains questions that were inexplicable before As a tumo or hypertrophied bone may give rise to convulsive seizures in epilepsy, and as its removal may be followed by relief, when no other structural cause exists, so in nervous catarrh, where new growths and other lesions of the nasal mucous membrane are present the attack may be started by the accumulation, and the suddenly setting free of uric acid This precipitates the paroxysm by its irritant action, which finds expression in the group of symptoms characteristic of nervous catarrh or asthma, instead of some one of the other allied diseases The particular form of manifestation may be determined by the growth, or seat of irritation, located in the nasal cavities Where this is the only determining factor of the nature of the morbid symptoms, no other organic disease having resulted from the long-standing trouble, the removal of such a peripheral source of irritation may give relief from these symptoms, but it may not prevent the uricacidemia from switching off into other kindred lines of disturbances, if it be not corrected

This uric acid theory makes clear the reasons why some persons suffer from attacks of nervous coryza under certain favorable conditions in winter, as well as during the warm months It also unifies all the various forms of hay fever They are all variations of nervous catarrh

Patients of this class are sometimes affected more or less by functional aphasia Haig's father suffered from time to time for a large part of his life from this trouble, and in old age had organic aphasia with right hemiplegia The same functional disturbance afflicted Haig very markedly, at times of excess of uric acid in the blood, with mental depression, lethargy and headache The histories of such cases are paralleled by the histories of nervous catarrh in many families

The periodicity of nervous catarrh has a counterpart in migraine that comes once in every seven, ten, fourteen or thirty days for years or for life It may last one day or less, rarely two, and is worse in the morning

In the last published paper of the late A Reeves Jackson he expressed his convictions that various neurasthenic symptoms, sleeplessness, headache, vertigo, neuralgia, muscular twitchings, vaso-motor disturbances, vague pelvic symptoms, etc , are dependent really upon the lithic acid diathesis He wrote "If this fact were duly recognized it would remove some of the cases from the list of those which are an opprobrium "

L C Gray says "Influenza, ague and other fevers store up uric acid in the body "

There are several causes that determine the manner in which the irritation produced by an excess of uric acid may express itself These are central, peripheral and hereditary causes "The structure of the nerve centers and the distribution of its vessels not only determine the kind of disturbances which uricacidemia will produce in any given case, but also explains why one individual suffers in this way from functional nervous disorders, while another with about as much uric acid in his blood and body escapes When the nervous system is depressed by fatigue, deficient food, etc , a smaller amount of uric acid in the blood will suffice to produce disturbance of function than at other times If uricacidemia is prevented, the nervous system will not itself originate disturbances This knowledge of the effects of lithemia gives complete power to produce or remove the vascular conditions, and the nervous disorders which are secondary (consequent upon) these conditions, by proper diet and treatment " (Haig) The arguments that apply to migraine are just as forceful in the case of nervous catarrh The peripheral causes, neoplasms, hypertrophies, etc , have already been considered

Heredity is probably the chief factor in determining the direction in which the uric acid diathesis will afflict an individual, whether it result in migraine, angina pectoris, asthma, nervous catarrh or some other neurosis, but undoubtedly accidental or acquired conditions may act as directing or localizing agents For example, of the latter class a student who is predisposed to such a neurosis accidentally inhales the fumes of burning phosphorus in the laboratory, and this excites the first attack of his nervous disorder, which naturally under these conditions takes the form of asthma On the other hand, many attacks of severe cold, or some injury to the nose, or the development of a polypus, may determine the nasal form of neurosis, or nervous catarrh I have such cases in mind

I believe we can produce and control attacks of nervous catarrh at will by treatment and diet, the same as we can migraine I was first led to experiment with an anti uric acid treatment of nervous catarrh by my endeavors to find a solution to the problem, why paroxysms of this disease attack sufferers regularly in the morning These attacks come on about the same time, morning after morning, although the previous afternoon and evening may have been free from suffering, and the night one of restful repose, with no direct access of dust-laden atmosphere from without, and no change in the contents of the sleeping apartments The following facts appear to answer this question the blood is the most strongly alkalin between the small hours of the morning and 9 A M , when it reaches its greatest alkalinity The more alkalin the blood, the more freely soluble is the uric acid Therefore, in the morning hours the blood is the most heavily charged with this irritant, and during these hours patients suffer the most from angina pectoris, migraine, asthma, nervous coryza and other functional nervous disorders

The blood is the most acid during the hours of bodily activity, and it reaches its maximum of acidity about midnight During this time there is only a small secretion of uric acid, and the amount circulating in the blood is minute As the blood begins to increase in alkalinity in the morning it dissolves the uric acid out of the more alkalin tissues in which it has been stored, the liver, spleen, cartilages, joints and fibrous tissues, and with the increasing alkalinity and solvent properties of the blood it becomes rich in uric acid until it produces the drowsiness, heaviness or other nervous phenomena peculiar to any given case

ABORTIVE TREATMENT

With these facts in mind, I attempted to break up the morning attacks of sneezing and nasal stenosis, by doses of acid at bedtime and on first awakening in the morning The experiment was a success A series of wretched mornings was followed by freedom of respiration and a sense of well being that seemed like a physical millennium After this result of preventing the morning increase in the alkalinity of the blood, in order to prove the correctness of my deductions, I used an alkalin treatment, and was both delighted and disgusted with the results The old enemy raged again, but here was clinical proof of my first proposition I have successfully repeated these experiments until I am satisfied of the correctness of these conclusions

The first acid I used for these experiments was the dilute sulphuric acid in doses of twenty or thirty drops in water, but on account of the griping pains and diarrhea that it produced in the early morning, I was obliged to substitute another It occurred to me to try Horsford's acid phosphate that I had used for other purposes some years since, on the recommendation of the late Dr Jewell I used teaspoonful doses of this without any ill effects, and with the result of giving complete immunity from suffering One or two teaspoonfuls in a glass of water at bedtime, and on first awakening in the morning were sufficient to break up the habit entirely In a few days after the symptoms ceased to appear in the morning, this dose was omitted The night dose was continued until the habit seemed to be entirely broken up If any nasal irritation reappeared, a dose or two would dispel it By adding sugar to this *acidulated drink it makes an agreeable lemonade,* but it is better to avoid the sugar, and as much as possible all other uric acid-producing substances

While I have depended on the mineral acids to keep down the morning alkalinity of the blood, Bence Jones claims that citric acid (lemonade) will accomplish the same result I have made it a point to have the morning dose well diluted with water, for the purpose of starting perspiration for I have observed that as soon as a patient has sneezed violently enough to produce free sweating, the symptoms either decreased or disappeared The sweating carries off uric acid and helps to free the blood

I am aware of the differences of opinion that exist concerning the influence of an excess of dilute phosphoric acid on the elimination of uric acid, the effects of acid on the tubules of, the kidneys, and the relation of a meat and vegetable diet to the formation of, uric acid, but I am careful to use only so much acid as is required to prevent the maximum of alkalinity from occurring The acid is used, not with the expectation of eliminating, but of clearing the blood of uric acid, for the purpose of preventing attacks during the season of suffering If the over-wrought nerves are relieved from this source of irritation, they are much less likely to respond to other excitants, and if the morbidly susceptible condition of the nervous centers is due to the action of the uric acid, its over-sensitiveness to all excitants may be relieved by correcting the uricacidemia After relieving the suffering with the acid phosphate, I have produced it again by neutralizing the acid with an excess of bicarbonate of sodium, and employing the usual doses This converted the acid into a ready solvent of uric acid, flooded the blood with it and produced the attacks In turn I have followed this up with the acid, relieved all the catarrhal symptoms by precipitating the uric acid from the blood into the tissues and produced the characteristic gouty pains Again, by substituting drachm doses of phosphate of sodium for the acid, I have precipitated all the symptoms of a severe nasal catarrh

Some other remedies produce effects parallel to the acid treatment Nitro-glycerin, nitrite of sodium, nitrite of amyl, antipyrin, etc , have a similar effect Opium raises the acidity of urine, diminishes the alkalinity of the blood and reduces the amount of uric acid It relaxes the arterioles and improves the circulation of the brain Iron and lead have a similar effect Mercury reduces the excretion of uric acid, reduces tension of pulse and produces diuresis If opium is used the ill effects that follow should be prevented by following up its use with salicylate of soda for a few days to free the system of uric acid Quinin, so generally used is contra indicated, for according to Quain, it brings uric acid into the blood

There is one remedy that has proved in my hands invariably unfailing in giving relief, especially when given at the beginning of an attack of nervous catarrh, or common colds It is for temporary use only, like the acid treatment I have employed it for the last twelve years or more, and published it a number of times, but in this case it is, like old wine, the better for age I refer to a combination of atropia and morphia, in the proportion of 1 part of atropia to 50 of morphia The ordinary adult dose is from one sixteenth to one-eighth of a grain of this mixture, according to the severity of the attack *It may be repeated in an hour or two, if the first dose* does not entirely relieve the sneezing, running at the nose and stenosis I do not believe it has ever failed to stop an attack when properly adapted to the case No person has ever acquired the drug habit through my prescribing it I never write a prescription for it, nor allow a patient to know the composition of the remedy, not for mercenary purposes, for I have more often given it away than I have charged for it, but in order to obviate the possibility of being responsible for a drug habit The morphia clears the blood of uric acid, diminishes the nervous irritability, suppresses over secretion from the muciparous glands and stimulates the circulation and activity of the nervous centers, while the atropia elevates the tone of the blood vessels, quickens the pulse, decreases all the secretions except the urine, sustains bodily temperature, stimulates the respiratory center, counteracts the constipating effects of the morphia and acts as an antispasmodic

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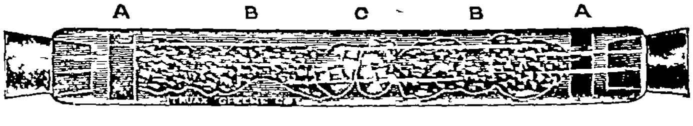

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This treatment can not be undertaken to advantage during the season of attacks, except so far as relates to diet Haig does not believe that excessive uric acid formation takes place, but from a considerable study of this subject, I am forced to the conclusion that an excess of uric acid in the system is not due alone to continued retention and storage of the small normal overflow by the renal vein, but to an increased formation also In a conversation with Dr N S Davis a few days since, that eminent authority corroborated the latter view It follows, then, that it is necessary to reduce as much as possible the use of those foods that increase the actual formation of uric acid, such as meats, sweets, beer, wine, etc , and limit the diet largely to fruits, vegetables, milk, fats etc

Exercise also aids in the excretion of uric acid, although there may be an actual increase in the amount of acid Lange treats periodical mental depression successfully by reducing the amount of food and by systematic exercise

A diet of milk with occasional very small quantities of egg and fish, with no other animal food, will prevent suffering from sick headache entirely, without medicinal treatment With this diet the natural ratio between uric acid and urea—1 to 33—is maintained Haig claims that by a uric acid producing diet one can store up in the body several ounces of uric acid in a few years—or by correct diet, not as many grains He has been on such a diet over eight years with almost never a headache By eating meat and drinking wine two or three days in any single week he is sure to bring on the migraine

A course of salicylate, salicin, lithium, etc , will remove the excess of uric acid If an alkali is given it is likely to produce uricacidemia and precipitate an attack of the trouble we are endeavoring to prevent For an attack, then, a dose of acid should be given to free the blood of uric acid, then the salicylate of sodium should be given for two or three days, or longer, to sweep it out of the body, but the salicylate should not be given during the attack, for it may aggravate the symptoms For a fortnight, or a month, perhaps longer, preceding the regular season of attacks of nervous catarrh, from two to six grains of the salicylate should be given every day or two, in order to get and keep the amount of the acid in the body down to the normal amount The copious use of the stronger lithia waters is advantageous also

This treatment, combined with proper diet, should be successful, provided that there is no organic disease of the structures, central or peripheral Any organic disease, hypertrophy, polypus, etc , must receive the necessary surgical treatment A vitiated condition of the blood, or a depressed condition of the nervous system must be corrected Excesses of every nature must be avoided All the organs of the system should receive such attention as to secure the harmonious coordination of their functions, for this treatment is directed against uricacidemia only, as a cause of suffering, but it should not be forgotten that there are other causes that may operate to produce attacks, just as in the case of spasmodic asthma arising from bronchitis, irritating gases and other excitants

I am of the opinion that with the new theory, therapeutics and proper diet of this disease, the medical profession need no longer say to hay fever patients in a patronizing way Suffer little children, for of such is the kingdom of heaven, but we must recognize and combat the uric acid diathesis if we would bring comfort to these patients and obliterate a stigma that dims the luster of our great art

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At the meeting of the American Ophthalmological Society in 1887, I presented a short article in regard to the increase of blindness in the United States, calling attention to the fact that according to the census reports, the number of blind in this country was increasing much more rapidly than the population The Society was kind enough to appoint a committee to examine into the subject, as did also the Medical Society of the State of New York, after the same figures had been presented there for consideration The committees in both of these Societies reported the advisability of some legislation to limit the further increase of what may be considered one of the principal causes of blindness, namely, ophthalmia neonatorum Since that time, the States of New York, Maine and Rhode Island have all passed laws which have for their object the preventative treatment of this disease, and I wish here to show the desirability of similar laws in other States

The facts in regard to the subject were published in the Transactions of the New York State Medical Society and of the American Ophthalmological Society so completely that there seemed but little to add to the subject Since then, however, the statistics gathered by the census of 1890 have been obtained, and these furnish sufficient additional data to warrant my calling attention to the subject again, and recapitulating briefly the reasons why legislation in various States should be enacted for the prevention of blindness

In 1880, for the first time, a systematic attempt was made to ascertain the entire number of the defective classes—these among the rest—and when the statistics for that year were compared with previous years the apparent increase was astonishing

When however, the number of blind in 1890 is compared with the number in 1880, we find that there is an increase of only 3 20 per cent , there having been in 1880, 48,929 blind and in 1890, 50,411 There are good reasons, however, for considering that this last census gave a much less complete record of such persons than did the census of 1880 I am indebted to Hon Robert D Porter for a typewritten copy of the returns concerning the blind taken June 1, 1890 The summary shows that there is a total of 50,411 Male, 27,983, female, 22,458, white, 43,351, colored, 7,060, natives, 41,265, foreign, 9,146

In some States this increase has been very slight, in others quite marked But whether the number is large or small, the important fact remains that a really large percentage of the blindness is caused simply by neglect in early childhood I mean, as a result of ophthalmia neonatorum It is difficult to

The first acid I used for these experiments was the dilute sulphuric acid in doses of twenty or thirty drops in water, but on account of the griping pains and diarrhea that it produced in the early morning, I was obliged to substitute another It occurred to me to try Horsford's acid phosphate that I had used for other purposes some years since, on the recommendation of the late Dr Jewell I used teaspoonful doses of this without any ill effects, and with the result of giving complete immunity from suffering One or two teaspoonfuls in a glass of water at bedtime, and on first awakening in the morning were sufficient to break up the habit entirely In a few days after the symptoms ceased to appear in the morning, this dose was omitted The night dose was continued until the habit seemed to be entirely broken up If any nasal irritation reappeared, a dose or two would dispel it By adding sugar to this acidulated drink it makes an agreeable lemonade, but it is better to avoid the sugar, and as much as possible all other uric acid-producing substances

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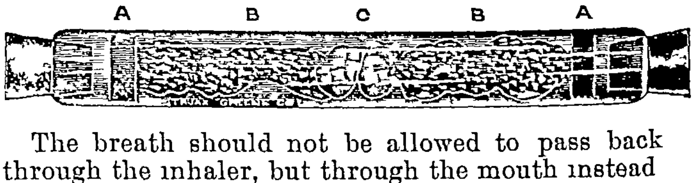

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In some States this increase has been very slight, in others quite marked But whether the number is large or small, the important fact remains that a really large percentage of the blindness is caused simply by neglect in early childhood I mean, as a result of ophthalmia neonatorum It is difficult to estimate exactly what percentage these cases bear to the total number of the blind, but various authorities estimate this from nine and one-half to ten per cent or even more In other words, on examining the figures carefully, we can say that without fear of exaggeration there are wellnigh five thousand blind in the United States, who are in that condition merely because of neglect on the part of those who had charge of them in early infancy If the estimates were based upon the number of blind in asylums the percentage would be almost twice as large, as has been proved by an examination of a large number of inmates of the blind asylums, not only in this country but also in Europe The details of this are referred to in the papers already mentioned, and the facts can be easily substantiated by reference to the works of Fuchs, Magnus and others On an average it may be stated, with a considerable degree of accuracy, that at least eighteen and one half or nineteen per cent of all the blind in early life are in this condition from ophthalmia neonatorum

This fact would bear statement in detail were it necessary, or were it in accordance with the limit proposed for this short communication Another fact which I would mention is one which also can be briefly stated before a society of those accustomed to treat ophthalmia neonatorum This is, that ophthalmia neonatorum can now be considered a preventable disease I need not elaborate this by calling your attention to the figures presented by Crede and others, or by referring to my own experience, or that which occurs in the practice of every one who has to deal with this disease We all know how favorable a prognosis can be given in the early stage, and on the other hand we know how extensive are the ravages which may follow after ulceration of the cornea has once begun All agree, I think, that when these cases are seen within the first week after birth a generally favorable prognosis may be given

This brings me to the next point which I wish to make that is, the desirability of legislation which should force nurses and attendants to bring these children to the notice of practitioners while the disease is still in the very earliest stage The story is a familiar one of the infant being brought to the office of the oculist, with the cornea ulcerating or perhaps perforated, and the mother and sometimes the attending physician thinking that the child has "taken cold" and requires perhaps no further treatment than the hot water or milk which has been applied to the eyes And the scene, also, is unfortunately familiar, of the mother weeping over a hopelessly blind child, all simply because the nurse has supposed that the infant has merely taken cold and had been relying upon some of the numerous household remedies just a little too long The question before us, therefore, is what means can be adopted to bring these children as soon as possible to the notice of a competent physician Education of the laity is useless Urging the nurses, professional or others, is equally insufficient It remains only to place the responsibility at once where it belongs by imposing upon such persons a severe penalty The surest and best means of accomplishing this is undoubtedly by legislation

This was the view taken of the subject by those who have considered it most carefully, and following the plan which had been partially adopted before in Switzerland, and elaborating it, a concise but explicit bill for the proper protection of these infants was passed by both houses of the New York Legislature, 1890, without a dissenting vote, and became a law The law was known as Chapter 41 of the laws of 1890, and was as follows

AN ACT FOR THE PREVENTION OF BLINDNESS

SECTION 1—Should any midwife or nurse having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant, to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine, of the city, town or district, in which the parents of the infant reside

SEC 2—Any failure to comply with the provisions of this Act, shall be punishable by a fine not to exceed one hundred dollars or imprisonment not to exceed six months or both

SEC 3—This Act shall take effect on the first of September, eighteen hundred and ninety

My own impression is that this law was sufficient to cover all cases, and a sufficient number of convictions could have been obtained under it, not only to call public attention to the existence of the law, but also to prove a wise and very excellent lesson to the class whom it was practically to affect A few convictions would have more effect in educating the laity and those who pretend to be nurses than would any number of lectures, leaflets or appeals of any kind One or two partial attempts were made under that law to bring nurses to trial in New York city, especially by Dr Derby of the New York Eye and Ear Infirmary He thought, however, that a loophole was left by the word, "notice," because nurses would be apt to say when placed on the stand that they had not noticed any such redness of the eyes or discharge from them This is such a small excuse that it ought not to prevent the working of the law as there presented Another objection to this, was that it was not quite strong enough, and not being a felony, it might be difficult to place the responsibility on the proper person for beginning a suit

The matter, therefore, was taken in hand by Hon Elbridge Gerry, who for many years has identified himself with legislation for children The substance of this law has been incorporated in another, known as Chapter 325 of the laws of New York for 1892 The clause in regard to this reads as follows

> Being a midwife, nurse or other person having the care of an infant within the age of two weeks who neglects or omits to report immediately to the health officer or to a legally qualified practitioner of medicine of the city, town or place where such child is being cared for, the fact that one or both eyes of such infant are inflamed or reddened, whenever such shall be the case, or who applies any remedy therefor without the advice, or except by the direction of such officer or physician, etc

It is further provided that this is to be punishable as a felony

We can, therefore, consider that in New York we have a law sufficiently stringent to teach nurses and midwives what their duties are, and parents what risks their children run when there exists what is ordinarily called a simple "cold in the eyes" It is important that the first cases should be so clear as to make conviction a practical certainty and in my own vicinity, at least, some cases of probable guilt have been allowed to pass unpunished But it can only be a question of a short time before a good typical violation of this statute comes under some one's notice, and after having been once tested subsequent convictions will be easy

The State of Maine was the second to pass such a law There the matter was taken in hand by Dr Holt of Portland, with his associates The bill was known as number 97 of the Senate, and has become part of the laws of 1891 The text is as follows

SECTION 1 —Should one or both eyes of an infant become reddened or inflamed at any time after birth, it shall be the duty of the midwife, nurse or person having charge of said infant, to report the condition of the eyes at once to some legally qualified practitioner of medicine of the city, town or district in which the parents of the infant reside

SEC 2 —Any failure to comply with the provisions of this act shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six months, or both

SEC 3 —This act shall take effect on the first day of June, eighteen hundred and ninety-one

The third State to have such a law was Rhode Island In that State the subject was brought to the attention of the Legislature, principally through the exertions of Dr F T Rogers That was passed at the January Session of 1893, and the text is as follows

SECTION 1 —Should any midwife, or nurse, or person acting as nurse, having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened, at any time within two weeks after its birth, it shall be the duty of such midwife or nurse, or person acting as nurse, so having charge of such infant, to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine of the city or town in which the parents of the infant reside

SEC 2 —Every health officer shall furnish a copy of this act to each person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed and the Secretary of State shall cause a sufficient number of copies of this act to be printed, and supply the same to such health officers on application

SEC 3 —Every person who shall fail to comply with the provisions of this act shall be fined not exceeding one hundred dollars, or imprisonment not exceeding six months, or both

SEC 4 —This act shall take effect July 1, 1892

It will be observed that the three laws now in existence are very similar, and as that of the State of Maine omits the word " notice," and is still complete in itself, it is perhaps the best thus far enacted, except that the penalty is too light

A question might arise as to what advantage it is to oblige nurses and midwives to report to physicians a disease of which a certain class of so called doctors are almost as ignorant as the nurses themselves The answer to this is three fold

1 The nurse is made to appreciate her responsibility, not only in that case but in others, and to know that the condition indicated by the redness and discharge is not anything to be trifled with

2 The parents also become alarmed when they know that the disease is sufficiently serious to be the subject of special legislation, so that in choosing a practitioner they select with rather more than ordinary care

Finally, as for the physician himself If he accepts the case he feels that he must understand it thoroughly and he will be apt to look it up with considerable care in his text-books and treat it intelligently Above all, if he fails to do that, the parents have a responsible individual against whom they can with perfect justice enter a suit for malpractice, and if he has proved himself incompetent he not only suffers the penalty which a law has provided for him, but one such case would be an example to him and to other practitioners in the community in which it occurred

It seems needless to urge further the advisability of similar laws in other States, especially in those where there is a large proportion of foreign emigrants in the population We know that their children are not only often cared for by midwives, but also often given over to them entirely at an early age, and women when accustomed to assume any such responsibility must be taught this part of their duties If they will not learn in any other way, a heavy fine or imprisonment is but a small penalty for the crime of having blotted out the sight of a human being Where the German population is large the children are often cared for entirely by midwives and these, though usually well qualified by instructions obtained in their native countries, are also not infrequently ignorant and careless in the extreme, and need to be taught that the hand of the law may interfere for the protection of the children given into their charge

Having shown that such legislation should be enacted, and that it is our duty to lend our efforts and personal influence to obtain it, I wish to say, finally, that it can be done usually with little effort Of course in any such undertaking it is necessary to enlist the sympathy and cooperation of a few leading men in each branch of the Legislature—those whose standing and character is such as to command respect for any measure which they advocate The personal cooperation of the Governor is also a warrant of success from the first But the average legislator is ready to listen patiently to any such claims of an unfortunate class, and his assistance for the bill is not difficult to obtain, being certain, as he is, that the originators of it have only the best motives If the politicians hesitate or are inclined to smile at measures for the relief of sore-eyed babies they are quickly brought to their senses, if confronted by such evidence as is unfortunately always at hand in every large city, or can be easily obtained among the inmates of every asylum for the blind Such men realize that they have with them the hearty approval of their constituents, of the press, and of the people, and that they are saving from a life of misery, to which death is often preferable, a large class of those who would otherwise be hopelessly blind

DR GOULD—I would like to ask has this Association, as an Association, taken any action by which we can urge upon the part of the Legislature the passage of such a law? Would it not be well for us to take this action now, either by appointment of a committee or in some other way? I think this is a very important subject, and one on which we should take some action very soon I will ask that the Association at once appoint a committee, whose names would give character to the work Such an action would be a very great credit to the Association

DR WILLIAMS—During last winter I was a member of the Legislature of my State While there I procured the enactment of an important law, which in substance is the midwife or nurse having charge of a newly born infant, who may have any inflammation or disease of the eyes within two months after its birth, shall report the case to the city or county physician, who is required to visit the child immediately, and if he finds the child not under the care of a competent physician he must take charge of the case himself, or see that it is attended to properly until cured

DR YOUNG—Some two years ago I got a complete copy of Dr Howe's paper and recognized its importance I had a bill drafted and introduced into the Legislature of my State, but the bill failed to pass, I suppose partly because of m negligence I have the bill and will try and have it pass at the next session of the Legislature

DR RANDALL—Last winter I had the misfortune to have under my charge a case of ophthalmia neonatorum which had been treated with the utmost care from its start The child was treated at birth by the general practitioner, with antiseptic cleansing of the eyes I was called in after the first week While I did all in my power to save the child's eyes, treating them myself day and night with all the skill that within me lay, I lost both of them The case was one in which I could see nothing that was left undone, and still the result was loss of vision in both eyes Fortunately the parties were my friends There are doctors having such cases who will probably not meet with the kindly judgment that was accorded me in this matter, and they might not be able to stand under the blow of condemnation that may fall upon them For the protection of ourselves and others we should be very careful in declaring too strongly that blindness can always be prevented in these cases

DR WURDEMANN—Such legislation carried through the Legislatures of all the States would be very valuable to the cause of suffering humanity We have nothing like it in our State For years, the reputable members of the profession have been endeavoring to get a mild medical bill passed by our Legislature but without avail Perhaps a law for the prevention of ophthalmia neonatorum, like that proposed by Dr Howe might be taken through We will try it at any rate within a short period Dr Randall's question, "Is blindness from ophthalmia neonatorum always preventable?" occurred to me during the reading of the paper Some cases are undoubtedly infected before birth, and even in the membranes, as in a case lately reported by Nieden It has been my fortune to see within a short period three cases of the disease that probably happened before birth as on delivery of the head the lids were agglutinated and when opened there was purulent discharge All three cases were attended by physicians, two of whom are noted for their antiseptic midwifery, and every proper means was used, but they all went to the bad In the city of Milwaukee there are more midwives than physicians, and in consequence we see considerable of infantile ophthalmia Albeit we must be careful just how strong we make our statements about the prevention and cure of the disease, as many eyes become blind under the best of treatment, and where such is the case the physician will be all the more blamed

DR TAYLOR—I still think that the majority of these cases can be cured as well as prevented The greatest thing is not in giving directions as to what should be done, but in seeing that those directions are carefully and faithfully carried out The physician can prescribe what he knows and he ought to be successful in every case where it is taken in time I believe that nearly every case of ophthalmia neonatorum can be cured or prevented

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IS CONSUMPTION HEREDITARY?—A FAMILY HISTORY

BY E C ATKINS, M D

COLORADO SPRINGS, COL

That "Americans dig their graves with their teeth," is a saying fraught with more truth than elegance That it is done unwittingly, more often than not, and that the best and most careful attention, coupled with the lack of proper information, frequently leads to the same undesirable end, will be seen by the following brief history

A well and healthy father, and a mother wiry and strong The former died of yellow fever at 42, and the latter of gall stone at 60 Both were country bred as were all their ancestors and all their children A perfectly clean family history for generations back No consumption in any of them There were nine children Of these, the second, fourth and seventh died as infants, of cholera infantum. The first died at 19 of consumption, the fifth is the present writer, who has the disease, held in abeyance, however, by climate and careful diet The sixth, still living, has had the disease for eight years, but is practically restored by the same means, and the ninth died of pulmonary hemorrhage at 9 months, during the illness of No 1 The first, third and ninth all died within seven months of each other, and, after the death of this group, a complete change of residence occurred, and a period of fifteen years elapsed before No 6 was taken with consumption, at the age of about 25, and five years later the writer developed the disease

Now, why this condition of things? Why so many cases of consumption in a family with no previous history of it? Did they inherit it? *Can* a man inherit a thing that his parents did not have? Or was it infection? and if so why did not all have it at the time? They were all miserable and anemic and would have fallen an easy prey to the germ So why this lapse of fifteen and twenty years before the last two developed the disease? With these last two was it inheritance or infection? Both were married, had good homes and healthy children They lived miles apart and seldom saw each other They could not have taken it from the same source

It was a noticeable fact that the children of this family were none of them as strong or well developed as their parents, and were much more nervous Why was this, and did it bear any causative relation to the development of the disease? I think it did, and will explain why

The parents of this family were good, old-fashioned country people, well educated in the "three R's," but not at all posted on diet and the nutritive value of food Food was food to them, no matter what kind it was One was as good as another Please to note that three out of nine of these children died of cholera infantum, showing, in all probability, that there was an erroneous method of feeding adopted very early in life Such things were not understood then as they are now, and the relation of feeding to cholera infantum was not as well recognized These three babes, coming of healthy stock, and being born as healthy as other children, and dying of cholera infantum, point out the fact that there was something radically wrong in the feeding of this family from infancy up, and that the same erroneous ideas prevailed all through their childhood will be seen by the following

During the years of childhood and youth, from 10 to 20 years old, strong coffee was given them, ad libitum, and with the kindest intention they were encouraged to take freely of it with the idea that it fortified the system for the labors of the day Their breakfast frequently consisted of strong coffee and rolls or cookies Griddle cakes, pies and puddings formed a goodly part of their food, and candy was an unrestricted article of diet Not that there was no other food, but they ate what they wanted and their appetites led them to this mode of feeding It was the natural result of the course of feeding adopted in infancy An abnormal appetite for the carbo hydrates being engendered in the earliest infancy by highly sweetened foods, and in later years by cakes and an excess of other starches, they did not care for meats, but craved and lived upon the non-nitrogenous foods, and taking this, together with the powerful effect of the coffee on the nervous systems of young and growing children, what wonder that they did not attain unto the stature of their fathers, who went to sea and lived on meat and fish What wonder that they grew up to be neurotic and anemic What better conditions for favoring lung diseases could be wished for?

The poor physical condition of the children attracted the attention of the devoted mother, and a physician, hoary with years and wisdom(?) was called in to suggest some way out of the dilemma, and what did he suggest? *Cod liver oil*, forsooth More non-nitrogenous food More heat, more combustion and no water in the boiler If he had only looked sharply into their mode of living and said "*More meat* for those starving children," how different would have been the subsequent history The habits of non nitrogenous feeding acquired in infancy followed them through childhood, and the two surviving ones into manhood All unconsciously they were pursued by the same relentless enemy that had wiped out the rest of the family, and in the course of time it did its work upon them also Every member of that family succumbed to erroneous feeding except the one that died of heart disease

Now, did they inherit it? No For it was not there to be inherited Was it inoculation? Perhaps so, partly, but I doubt it If you will pardon a vulgarism, they all fed out of the same trough and it was the trough that was inherited, not the disease Consumption can be propagated by improper feeding with almost as much certainty as by inoculation with the tubercle bacillus, but it takes longer I fully believe that the enormous death rate from this disease in this country is largely, if not chiefly, due to our mode of feeding Why do the operatives in the New England mills and shops, who are born of healthy emigrant stock, die of this disease in such numbers? Is it not because they are poorly fed? Because, pushed by poverty, they live so largely on cheap carbo hydrate foods and little meat? Look into the history of a given number of cases of consumption and you will find that 99 out of every 100 have been large consumers of bread and other starchy foods and poor eaters of meat It only needs time to accomplish the end on such food

Nature intended man to eat a large proportion of meat food with a proper addition of other foods, as will be seen from the teeth, twenty of which are of the cutting and tearing kind like those of the carnivora, and the stomach, which is a lean meat digesting organ These ample provisions for digestion of nitrogenous foods would not have been made if man had been designed to subsist upon the cereal grains and other starches But civilization has so changed all this that an excess of non-nitrogenous foods is the rule and consumption the result Look at the American Indian In his native state he was a meat eating animal, living from necessity on the products of his bow and gun, and consumption was a rare, if not unknown disease Now he is "civilized" He is fed by the Government, according to civilized methods, with a large percentage of non-nitrogenous foods, and consumption is the scourge of the race, and is sweeping the red man off the face of the earth Did the change of food have nothing to do with it? Why are the English people so robust and ruddy? Why is consumption less prevalent there in their foggy island than here? It is well known that they are large eaters of beef Has this fact nothing to do with it? While there are some things to be said on the other side, I believe that the above suggestions point to a great truth as well as a fatal error in the diet of Americans, which is fast becoming worse and worse Just in proportion as the food of the coming generation becomes more complicated and more delicate, just in proportion as the starches, etc , supersede the meats, just in such proportion will the ravages of consumption continue, and the disease run rampant among us

BOOK NOTICES

Transactions of the Medical Society of the State of Washington.

This modest pamphlet of 153 pages, records the proceedings of the Fourth Annual Meeting, which was held at Tacoma The papers read at the meeting are interesting, and in general highly creditable to the authors

Transactions Medical Association of Georgia Forty-fourth Annual Session

This handsome volume, containing 426 pages, is well printed and ably edited by the Secretary, Dr D H Howell. The papers are excellent, with the exception of one on sterility in the male, which Dr Thomas in the *Southern Medical Record* for October, asserts is largely plagiarized from Gross and Ultzman The author, it may be said, had at least the good taste to select standard authorities from whom to borrow It was probably altogether in the interest of the Society that he did so, instead of depending upon himself

Transactions of the Medical and Chirurgical Faculty of the State of Maryland

This is a pamphlet of 124 pages, containing the minutes of the Ninety-Fourth Annual Meeting, the President's address, memorial notices of deceased members, and other interesting matter The papers read at the meeting were not printed this year owing to various causes The address of the President, Prof Wm H Welch, on "Acute Lobar Pneumonia," what would have been expected from that distinguished gentleman, a finished article on the subject He is of opinion that the *micrococcus lanceolatus*, is the specific cause of pneumonia

Duane's Students' Dictionary of Medicine The Students' Dictionary of Medicine and the Allied Sciences Comprising the Pronunciation, Derivation and Full Explanation of Medical Terms, together with much collateral descriptive matter, numerous tables, etc By ALEXANDER DUANE M D, Assistant Surgeon to the New York Ophthalmic and Aural Institute, Reviser of Medical Terms for Webster's International Dictionary In one square octavo volume of 658 pages Cloth, $4 25, half leather, $4 50, full sheep, $5 00 Philadelphia Lea Brothers & Co 1893

Dr Duane's already great experience as a lexicographer would lead us to expect an excellent work, and in general we are not disappointed, but we must confess our regret that he has chosen to adopt the English pronunciation for Latin words He thus differs from Dunglison and Foster, and if followed, will lead to still greater confusion than now exists He, however, makes an exception in words ending in *itis*, in which he allows the Continental vowel sounds It is singularly unfortunate that in this day, when every effort is being made to unify scientific terminology, that all can not agree It is simply impossible to force the English vowel sounds on the remainder of the world, and there is no reason why Americans should adhere to a pronunciation only used by a single nation Dr Duane has carried this Anglomania to an extreme, for instance the pronunciation, "ka thet-ur-ism," is so far away from the ordinary usage, as to be almost unrecognizable The same remark applies to gelatinize, which the author advises us to pronounce "jee-lat-i-nis" He tells us to pronounce capsule "kaps-yule," and so would any one born within the sound of Bow Bells Caproyl must be pronounced "ka-proh-il"

It is a great pity that an excellent dictionary should be used to cockneyize the already bad pronunciation in use in this country

The dictionary excels in definitions of chemic terms, but will always be a bad book for students, until its vicious system of pronunciation shall be corrected A student who follows this pronunciation will find his medical language unintelligible when he visits the Continent

The Throat and Nose and Their Diseases, With 120 Illustrations in Color, and 35 Engravings Designed and executed by the Author, Lennox Browne, F R C S E Fourth Edition Pages, 734 Philadelphia Lea Brothers & Co 1893

Mr Browne is one of the eminent laryngologists of the world, and, as the value of a treatise on this subject depends largely on the conclusions reached by individual work, we can commend this as furnishing results of a large and extended experience enriched by details of cases that have come under his own observation The present edition contains much that is new, especially in that part devoted to diseases of the nose The colored illustrations grouped together in the back of the volume were made by the author and are admirable in drawing and coloring Many of the drawings in the body of the book, however, have been very poorly reproduced in the wood cuts

In treatment of diseases we find much to commend and some things to criticise Among others, the author's use of menthol In the present, as in former editions, he advises menthol in a solution, for the nose, of 10 to 20 per cent Few patients can tolerate such a strength, and complaints have been made by a number of patients of the severity of the treatment by menthol spray, which they received while abroad We have found from a number of years' experience, that as good results are obtained by the use of a solution containing from 1 to 10 grains to the ounce without the suffering attendant on the stronger applications Mr Browne has become a convert to the more extended use of chromic acid in turbinated hypertrophies, and gives explicit directions as to his method of applying it In the hands of an expert we do not doubt that it is often efficacious, but in the hands of the average practitioner we can not but believe, with many of the best authorities in this country, that it is an unsatisfactory agent not easily controlled, causes more pain, and is not nearly so efficacious as the galvano cautery Anesthesia is mentioned as being accomplished by placing a cotton wool pledget soaked in cocain 15 per cent in the naris, a method that we believe in the majority of cases would cause the absorption of more cocain than necessary, and would leave some parts untouched by the solution, and not anesthetized We find that the author reasserts his belief in the non identity of laryngo-tracheal membranous croup and diphtheria, the former of which he regards as non specific, sporadic, non inoculable, non-infectious, causing death by an exudate which mechanically obstructs the larynx and trachea, and attacks children only These views of the non-identity of the two diseases are at variance with those of many authors, and we are apt to continue to be in doubt in the presence of cases of membranous croup after reading his views carefully, and to treat the cases as diphtheritic, a condition of affairs from which we hope some day to be rescued by results of the study of the bacteriology of this disease, which has been truly called "the scourge of childhood, the dread of parents and the reproach of medical art"

On the whole, the general practitioner and specialist will find a book fully abreast of the times, with very much to praise and little to criticise, and one which covers the subject completely

Text-book of Otology for Physicians and Students By Dr L Jacobson, Privatdocent, etc , Berlin, with 318 Illustrations on 20 plates Pp 450 Leipzig Georg Thieme, 1893 (German Edition)

A result of the extraordinary and healthful activity in the field of otology is the appearance of several treatises within the last few years The text book of Dr Jacobson is largely based on his experience of sixteen years as Assistant in the Otological Clinic of the Berlin University Familiarity with this book will certainly direct the attention of fellow practitioners to the opportunities at the Berlin clinic

The book is intended mainly for the general practitioner who wishes to secure a more thorough knowledge of aural diseases than our colleges can give Stress is, therefore, laid upon a clear and succinct description of the various diseases in all their aspects The interdependence of general and aural diseases, and especially the danger to life from the latter, are well and often emphasized The treatment is fully set forth in all cases The judicious tenor which characterizes the language of the treatise invites the confidence of the reader Meddlesomeness is deprecated Cases of severe injury, for instance, or even death, resulting from the bungling use of forceps when the operator was not accustomed to the use of reflected light in guiding his hand are recorded in every country Asepticism is urged even in small operations The Eustachian catheter is being displaced by Politzer's and other methods of inflating the middle ear, which do not require special skill This naturally leads to the abuse of that potent remedial agency, air, which can do such harm when unnecessarily employed It is stated how catherization aids auscultation of the middle ear, how it is more advantageous in unilateral disease, etc The importance of early treatment in those cases of dry catarrh of the middle ear, which later on prove so annoying, is impressed on the family physician, who is generally first consulted

The illustrations are of great number and variety, and although not beyond reproach artistically, they will prove quite acceptable The normal anatomic relations of the auditory organ, instruments for daily use and the greater operations, appliances for the improvement of hearing, pathologic changes of the drum head, malformations of the outer ear, etc , are shown in plates at the end of the book

Dr Jacobson's skepticism in regard to the reliability of the generally accepted tests for hearing will not be shared by all his readers, but his able arguments are well worthy of consideration Lucae's pressure probe has often proved efficacious in non suppurative catarrh and when the drum head is perforated This useful instrument has not gained the popularity it deserves Any measure promising relief in that prevalent and intractable disease which embitters the existence of so many of our patients—sclerosis—should be hailed with delight, and be given a fair trial before uncertain operations are advised The major operations are accurately described with due reference to the latest publications The operation of Stacke, as modified in the Berlin clinic for several years by Dr Jansen, is clearly described The short chapter on topical diagnosis of cerebral diseases, and projection of the cortical centers and gyri on the surface of the skull, is indicative of the tendency of modern otology

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS
Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO 68 WABASH AVE CHICAGO ILLINOIS
F J REBMAN LONDON AGENT 11 Adam Street STRAND LONDON
W H LOWDERMILK & CO, WASHINGTON, AGENTS

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All members of the Association should send their Annual Dues to the Treasurer RICHARD J DUNGLISON M D, Lock Box 1271 Philadelphia Pa

SATURDAY, NOVEMBER 25 1893

NATIONAL COMMISSION ON THE OPIUM TRAFFIC

When any abuse or apparent wrong excites widespread inquiry, the English Government has always shown great readiness to investigate it through a Parliamentary committee From this has come some of the best studies on various social and sanitary topics ever made The temperance question, and asylums for inebriates, insane and others of the dependent classes have been the subject of exhaustive investigation and the reports in the Blue Books are libraries of facts of great value In striking contrast to this is the opposition of our Congress for many years, to the persistent efforts for a governmental commission to inquire into the alcoholic traffic of this country The English Government during the past ten years have had three Parliamentary Commissions who have, after months and years of investigations, issued large reports of testimony, on various phases of alcohol and its use and abuses

A few months ago the House of Lords appointed another commission on the opium question It is well known that a large part of all the opium used in the world comes from India That Government has protected and encouraged this traffic, and even engaged in war in its defense with China, who tried to stop the trade which they claimed produced so much demoralization of the people This opium trade has been pressed with great vigor by the Government of India and its traders everywhere As a result, an anti-opium society has been in existence in London and India, who have opposed the extension of the traffic, especially to semi-civilized countries, and who have urged that restrictions in both its growth and use should be applied They demand that it should be treated as a medicine and poison and should be regulated, and not put on the market free and even urged as a luxury and food It is to investigate these disputed facts that a Commission has been appointed The facts to be determined were 1, whether the growth of the poppy and manufacture and sale of opium in British India should be prohibited except for medicinal purposes, and whether such prohibition could be extended to the native States, 2, to note the existing arrangements with the native States in respect to the transit of opium through British territory, and on what terms the arrangement could be with justice terminated, 3, the effect on the finances of India of the prohibition of the sale and export of opium, taking into consideration, *a*, the amount of compensation payable, *b*, the cost of the necessary prohibitive measures, *c*, the loss to the revenue 4, whether any change short of prohibition should be made in the system at present followed for regulating and restricting the opium traffic and so raising a revenue therefrom, 5, the consumption of opium by the different races and in the different districts of India, and the effect of such consumption on the moral and physical condition of the people, 6, the disposition of the people of India in regard to the use of opium for known medicinal purposes, their willingness to bear in whole or in part the cost of prohibitive measures"

This Commission is composed of several eminent physicians and government officers and have had six sessions in London, and then adjourned to India to take testimony on the ground, of persons who would necessarily be more familiar with the facts than others The testimony of witnesses during these six sessions at London was singularly frank and outspoken Medical and other missionaries were emphatic on the evils of indiscriminate use of opium. DR GOULD said that one drug firm imported 50,000 ounces of morphia to China last year The large quantities of opium consumed in Burma, China, Formosa, Siam, Japan and adjacent countries, and the degenerations which have followed, were described in some detail Curious statistical facts were related of the extent and secrecy of the use of opium, and various devices to procure it, and the profound mental and physical degeneration which followed Unlike spirits or other drug takers the opium user rarely came under legal or public notice, he became more secluded and retired from public observation as his addiction increased Opium was a favorite means of suicide, and a large per cent of these cases died by this means

While the evils and horrors of opium addiction were urged in the strongest way and sustained by facts and statistics, the opposite side made a very startling presentation of contrary facts and statements One man of large experience had never known a death from the use of opium, and believed its use as harmless as that of smoking hay or straw Another witness was sure that opium in any form was beneficial to the native races, and only of damage to the Europeans when used in excess. Other witnesses were equally clear that no harm could follow the use of opium in moderation by any peoples.

The Commission showed great firmness in calling all persons who might possibly, from experience and observation, be acquainted with the subject. If his testimony seemed extreme he was permitted to explain, and was questioned as to the facts and basis for his statements. His capacity as a good observer was questioned frankly by the members of the Commission, and he was given ample opportunity to make all his views clear. The next meeting of the Commission will be at Calcutta in November, and be continued in different cities. It is evident that the testimony which will be given before this Commission will comprise a new chapter on opium and its effects on the race, and the Blue Book in which the testimony will appear will be of unusual interest. It is a source of regret that we can not have a similar commission, made up of experienced men, above political levels, to take testimony and report on the many great scientific and sanitary problems which concern the entire country. Such commissions could gather facts that would be authoritative in the study of many problems now practically buried in absurd theories and dogmas.

TYPHOID FEVER AND WATER SUPPLIES.

There are fashions in medicine as in everything else, and among the sanitarians and public health men as among the clinicians. When some years since the connection between typhoid fever and sewer air was suggested by the evidence of accumulated observation, every outbreak of that disease in which the mode of propagation was not patent was ascribed to defects in the sewerage system or in the house plumbing. More recently, when the water propagation of the disease was demonstrated in some instances that are now classical, as the Lausanne epidemic in Switzerland and the Plymouth outbreak in this country, it became customary to ascribe to an infected water supply all cases of uncertain origin. Conservative medical men who accept new views slowly have often been dissatisfied with the grounds on which water supplies have been condemned in special outbreaks. There has, however, now been made public in a Supplement to the Report of the Medical Officer of the Local Government Board of England, an instance in which, in the words of the Medical Officer "Seldom, if ever, has the proof of the relation of the use of grossly befouled water to the wholesale occurrence of enteric fever been more obvious and patent."

Over an area of 1,100 square miles in England, comprising 32 sanitary districts and containing half a million of inhabitants, enteric fever has for years past been unduly prevalent. Within this area where the infective material was ready to hand there were 10 sanitary districts containing 200,000 of the aforesaid inhabitants, in which occurred two marked and sudden outbursts of enteric fever, one Sept. 7—Oct. 18, 1890, and the other Dec. 28, 1890—Feb. 7, 1891. The remaining portion of the area mentioned had meanwhile insignificant fever rates. Moreover, certain of the affected districts suffered more than others, having rates of 29 and 24 per 10,000 of the population, as compared with 3.5 and 1.5. A careful inquiry was made into the general sanitary circumstances of the affected districts, dealing especially with questions of house accommodation, disposal of excreta and refuse, sewerage, drainage and milk supply. As regards the last, there was of course little likelihood of its being concerned on account of the wide extent of the involved area. Many sanitary faults were discovered, but no community of any such, in sanitary factors could be found to affect the several areas invaded by the fever. And not only so, but amongst localities where precisely similar faults obtained, some places suffered severely whilst others enjoyed almost complete immunity. One fact, however, was found to be common to the affected places, and that was the use of water pumped from the river Tees. This river is grossly fouled with sewage, and opportunities for the access of the specific material of enteric fever to its waters had been constantly recurring. Immediately antecedent to the epidemic outbursts, sudden floods had washed vast masses of filth which had been accumulating on its banks, into the river and along its current to the points of intake, from which the water was pumped for delivery to certain populations, and it was these populations who suffered so severely from the exceptional prevalence of enteric fever.

Dr. Fred. W. Barry, Inspector for the Board, deserves high credit for a report, which will tend greatly to the suppression of typhoid fever by bringing forward so prominently its connection with the presence of sewage in water.

HAVE AGENTS AUTHORITY TO EMPLOY PHYSICIANS?

The question as to an ordinary agent's, or general manager's authority to employ a physician to attend an injured employe seems to be one not yet settled by the courts. There are several branches of the subject, one pertaining to railroads, another to factories and manufacturing establishments. The first is differentiated from the second and other important divisions by the fact that railroad companies occupy a peculiar position with reference to such matters, exercising quasi-public functions, being clothed with extraordinary privileges, carrying their employes to places remote from their homes, subjecting them to unusual hazards and dangers Here a number of decisions will be found, and the law has, by reason of the dictates of humanity, and the necessities of the occasion, imposed upon such companies the duty of providing for the immediate and absolutely essential needs of injured employes when there is a pressing emergency calling for their immediate action In such cases, even subordinate officers are sometimes, *for the time being, clothed* with the powers of the corporation itself for the purposes of the immediate emergency, and no longer But to inquire further into this, is not our purpose at this time It is to call attention to the decision of the Appellate Court of Indiana in the case of Chaplin V Freeland, rendered Oct 13, 1893, which was an action brought by John T Freeland to recover from William Chaplin, a resident of Canada, doing business at Hiltonville, Ind , for services rendered at the request of his superintendent and general manager to a servant of his who was injured while in his employ This seems to be a pioneer on the general subject, or at least on the power of an agent or general manager of an ordinary manufacturing establishment to employ a physician or surgeon for injured employes The court says that it has been referred to no case holding it to be within the scope of the duties of a manager of a factory, for either an individual or a corporation to employ physicians or surgeons for employes Neither has it, it says, been able to find any such case The case of Swazey v Manufacturing Co , 42 Connecticut, 556, is cited as authority for the proposition in I American and English Encyclopedia of Law, 365, as applied to corporation, but the court says that the learned editors have misconceived the holding of the case, which is directly to the contrary, deciding that it must be left to the jury, as a question of fact, whether or not he had such power The court says that it is, therefore, not prepared to hold, as a matter of law, that the employment of a physician or surgeon for injured employes comes ordinarily within the scope of the duties of a general manager of an ordinary manufacturing business Usually, an injured employe procures and pays for his own attendance, and then, if his employer be in the wrong, recovers this sum from his employer, with his other damages But it is to be noted that there were no facts brought out on the trial showing any emergency save a necessity for the immediate services of a surgeon No necessity for action by the employer was shown Neither did it appear but that the injured man was possessed of abundant means to provide for himself, nor that he lacked friends and relatives able and willing to provide for him Whether or not such an extreme case might arise as would justify or require the court to impose on individual employers a duty analogous to that imposed on railroad companies, it is said it was unnecessary for it in the present case to determine

The moral of which is, that if you wish to be "cock sure" of your fee, you must have somebody positively assume the liability when you take the case

THE PASSING OF THE CORONER

The New York Academy of Medicine is virtually a unit in seeking the demolition of the antiquated coronorial system The Medico-Legal Society has also taken action in the same direction New laws will without doubt be enacted at the next session of the Legislature of the State of New York, abolishing the old methods and introducing measures *planned after the Examiner system of Massachusetts* The many abuses of the old system—the growth of generations and unstinted authority, especially in our badly or crudely governed cities—have at last made themselves so obnoxious that even the conservative Academy has been impelled to action The following paragraphs are a part of the voluminous series of resolutions adopted at the last meeting of the Academy

> "*Resolved*, That a medical man of mature years, established character, broad mind and sound and extensive information in anatomy, pathology, toxicology and all the other branches of forensic medicine must be the responsible occupant of an office in whose keeping are the *most sacred interests of the* individual and of the community, and to him should be delegated the initiative and power to elaborate the *investigations* of an actual or alleged criminal act, his *conclusions* being reported to the office of the District Attorney, and be it
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> "*Resolved*, That the New York Academy of Medicine earnestly calls the attention of the approaching Constitutional Convention to the admirable system of medical examiners which the State of Massachusetts has substituted for the coroners' system, and the Academy urges the enactment of similar laws in this State"

EXPERTS MAY TESTIFY AS TO NECESSITY FOR THE REMOVAL OF AN EYE

An expert in the treatment of diseases of the eye may testify in an action brought by a patient to recover damages from a third party for negligence resulting in an injury to her eye, that he removed the injured eye, which was totally sightless, to save the sight of her other eye, which was being impaired, and that he had her under his charge for several weeks, and had a distinct recollection of her case And so may another expert testify in such case, the Supreme Court of Wisconsin holds, in Reed v City of Madison, decided Sept 26, 1893, that in his opinion, it was necessary to remove the injured eye to save the sight of the other eye, which was endangered by sympathetic inflammation

Blank Applications for membership in the ASSOCIATION, at the JOURNAL office

SELECTIONS

The Treatment of Articular Rheumatism —Dr Edwin Lang regards salophen as the most suitable and effective anti-rheumatic at the present time Even in doses of 1 5 grams four or five times daily it exerts a favorable influence upon the fever, not producing a rapid remission, but a gradual reduction accompanied with a relief of the pains and improvement of the general condition As an anti-rheumatic salophen has a specific effect upon the symptoms of acute articular rheumatism In very recent cases the pains in the joints diminish on the following day, subsiding gradually during the use of the remedy, and the swelling of the joints decreases with equal rapidity, so that mobility is soon restored Although light cases are for the most part cured completely and permanently in the course of three or four days, this favorable and rapid result can not, of course, be expected in all cases Many cases of acute articular rheumatism are frequently so obstinate that salophen must be administered for a long time, often for weeks, before the symptoms have completely vanished, but it is in this particular class of cases that salophen often proves invaluable For while other anti-rheumatics after continued use always produce disturbance of the digestive organs and of the general health, in consequence of which they have to be given up, the anti-rheumatic and anti febrile effects of salophen may be utilized uninterruptedly, since it does not give rise to gastric disorder nor affections of the ear, and does not impair the appetite and digestion even when administered for weeks This property of salophen which is of extreme value in the cure of these obstinate cases depends, upon the fact that it passes the stomach unchanged, being decomposed in the intestine and that a large portion of the drug is excreted through the skin with the resulting profuse perspiration It may further be mentioned that by reason of remarkable curative properties salophen has been employed for the treatment of many nervous affections and has proved a valuable remedy for relieving pains, especially in the various forms of nervous headache In cases of unilateral headache a single dose of 1 5 grams is often sufficient to at once arrest the attack

Salophen must be regarded therefore as superior to all other similar remedies, both as regards its anti rheumatic and anti-febrile and its marked anti-neuralgic effects but its chief point of superiority is that it may be used without danger by the laity, inasmuch as symptoms of poisoning such as have been frequently observed after the incautious use of antipyrin and antifebrin, never occur We are, therefore warranted in regarding salophen as one of the new remedies which by reason of its freedom from danger and its prompt pain-subduing effects, will prove extremely serviceable as a household remedy in recent cases of articular rheumatism, since it never can be predicted with certainty whether the disease even if of mild character, will be attended with injurious consequences —*Hamburgische Hausfrauen Zeitung*, No 166, 1893

Extremes in the Death Rate of Typhoid —"Dr Benjamin also remarked that the treatment of typhoid fever had improved or the character of the disease had become milder His attention had been arrested by the report from the Cooper Hospital of Camden, where during the past two years the mortality from typhoid fever had been reduced to 2 per cent One of the fatal cases was a man who undoubtedly would have gotten well had he not disobeyed orders and got out of bed when known to have a weak heart He died suddenly of heart failure When looking up the death rate from typhoid he found that in one hospital in Philadelphia it was 6 per cent, and the treatment employed, said to be the best, was by the cold pack In the Cooper Hospital they had not used the cold pack, but had employed the antiseptic treatment of disinfecting the bowels In the Pennsylvania Hospital the death rate from typhoid was 9 per cent last year He found to his great astonishment that the Philadelphia Homeopathic Hospital (Hahnemann) reported a death rate from this disease of 24 per cent the last two years, 1891 and 1892

"The location of their Hospital was one of the best (and under the treatment of their leading Professors) and he was unable to understand why they should have a death rate 1200 per cent higher than others 100 per cent higher than the most unfavorable statistics in Philadelphia under the "old school" system, yet the Homeopathics laid special claim to superiority in fevers, if in anything The epidemic had been the same, the circumstances the same (except of course the treatment) No explanation had been offered, notwithstanding the daily press had mentioned the subject" —From the Transactions of the Medical Society of New Jersey, 1893 Pages 36–37

A Contribution to the Study of Club Hand —By Reginald H. Sayre, M D , Orthopedic Surgeon to Bellevue Hospital Outdoor Department[1]—Congenital club hand is a rare deformity Club hand resulting from an injury to the central nervous system, or to an unsuspected fracture of the bones at the time of birth, is not strictly speaking a congenital affection. In congenital cases there are three varieties 1, the skeleton is complete and well-formed, 2, the skeleton is complete, but ill formed, 3, the skeleton is incomplete and distorted

The general belief is that most of the cases belong to the third variety The writer has seen in all five cases, only two of which belonged to this division In four of the five cases club foot in one form or another was also present

In milder cases, manipulation and retention in the improved position with plaster of-paris is of great benefit. In severer cases, section of tendons, ligaments and fascia may be necessary Open section is often preferable, and when the flexors are involved it is better to operate in the arm cutting the tendons diagonally, slipping the ends by each other until the required length is gained and then suturing Two of the author's cases were due to great contraction of the flexors of the fingers, but neither of them came to operation In a double case, which is still under treatment, manipulation and plaster-of-paris is doing good work In another case, also under treatment, the child has right club hand, right club foot and left lateral curvature. The whole right side of the body is less developed than the left, possibly due to disuse, the right hand and foot being so deformed as to prevent even moderate use The club-foot was recently cured by an operation In the club hand, the radius and thumb are absent, together with the first metacarpal bone and several of the carpal bones, exactly which ones it is difficult to make out The hand was perpendicular to the arm on the radial and flexor side, the ulna being curved 30 degrees to the radial side The carpus did not articulate with the ulna, but was drawn up above its distal end, and was attached to it by means of firm ligamentous bands

The writer first performed an osteotomy of the ulna and corrected the curve After an ineffectual attempt, by several weeks of traction, to lengthen out the ligaments so that the carpus could be brought down to the end of the ulna, he cut down upon the ulna and separated all the ligamentous attachments from it but even then could not draw down the carpus sufficiently, and he therefore removed two carpal bones which he thought were the os magnum and the unciform The tip of the styloid process was then cut off, and the end of the ulna was inserted into the gap left by the removal of the carpal bones The hand was dressed in the straight position, and after three weeks, passive movements of the wrist were begun with the object of creating a serviceable joint if possible The operation benefited both the position and the usefulness of the hand, although an apparatus is still worn to give strength to the wrist and to preserve a better position of the ulna, which tends to slip a little from its position unless thus supported

The treatment of club-hand must depend upon the conditions existing in each individual case The writer's operation is the first one of the sort reported, so far as he is able to learn

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[1] Abstract of paper read at the Pan American Medical Congress Published in the Journal last week but contained so many typographical errors that it was necessary to reproduce it

ASSOCIATION NEWS

Change of Date of Meeting—Official Notice —In order to enable the State Medical Societies to send instructions as to their action in the matter referred to them by the American Medical Association at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the Association at San Francisco has been changed from the first Tuesday in May to the first Tuesday in June, 1894

William B Atkinson, Permanent Secretary
James F Hibberd, President-Elect

SOCIETY NEWS

Orleans Parish Medical Society, Sept 9, 1893

Meeting was called to order by Vice President M M Lowe Sixteen members were present

Dr E D Fenner read the following paper on

EXTERNAL URETHROTOMY FOLLOWED BY SEPTIC ARTHRITIS

The case which I propose to present to you is in truth one upon which an external urethrotomy has been performed, but the operation itself has been completely overshadowed by the complications that ensued I lay it before you, not to serve as a text for any discussion of septic arthritis, but simply as an example of the severe and unexpected results that sometimes follow an apparently simple and favorable operation For many of the data I am indebted to Mr Lovell, R S of the ward John Henry, aged 21, was admitted to No 2 on June 25, 1893, suffering from urethral stricture He passed his urine with straining and in a very small stream This he had noticed three months before, but it had grown, progressively worse As is frequently the case with negro subjects, he denied any previous venereal trouble On June 27 a filiform was inserted with the intention of passing a Goulé sound The whalebone was old and defective, and, slipping from the grasp of the assistant who held it was doubled upon itself by the sound and broke off in the urethra

External urethrotomy was now done the whalebone extracted (a portion of it was fortunately still in the urethra) and the whole canal was dilated with steel sounds Considerable traumatism was inflicted upon the penile portion in this operation

The patient was put to bed and in the evening his temperature was 101 degrees From that time till July 5 the temperature ranged between 99 and 100 degrees, when on the morning of the 5th it rose to 103 degrees From that time till the 16th it remained very high but irregular, owing to the use of antipyretics On the 8th the thermometer registered 105½ degrees, on the 11th it was again above 105 degrees These were the highest records On July the 16th he was transferred to a medical ward, on the suspicion of typhoid fever

From the day after the operation he complained of pain in the urethra and perineum, but no signs of a phlegmon could be discovered and the urine was only slightly tinged with mucus With the advent of the high fever came intense lumbar pain, with some tympanites and tenderness over abdomen

He remained in the medical ward for thirteen days, during which there developed an arthritis of the left wrist, and of the right knee and elbow His temperature now ranged between 99 and 102 degrees, generally being about 100 degrees His condition was one of general sepsis Abscesses formed and were opened on the shin below the inflamed knee, and in the axillæ From the right elbow and knee fluid was removed with the aspirator, in which was found a considerable amount of pus The joints were immobilized with plaster casts, and in the case of the knee an ice bag was kept on for three days, before the plaster was applied

In addition to these serious joint troubles, on August 10 a profuse watery diarrhea commenced and continued till the 23d when it was finally checked by the lead and opium pill, having been uninfluenced by mixtures of bismuth, salol and chalk From August 23 the man began steadily to improve The swollen joints subsided, temperature seldom rose above 99 degrees appetite returned, and on September 1 he got up and has since been able to sit up during the day

Of course, during this time the urethra has been left to itself, at no time has the man been in a condition to stand the passage of a sound, but some urine passed by the meatus, and before long I hope to be able to pass an instrument and restore the canal Throughout the case the treatment has been symptomatic Fever was combated with quinin and phenacetin, and with sponging

The joints were put at complete rest by means of immovable splints In the case of the knee a considerable amount of fluid was withdrawn by the aspirator and the ice bag applied for several days

While still weak and not entirely over the arthritis, the patient is rapidly improving, and we hope will yet recover entirely

Dr Chassaignac said that the case was more interesting as a case of septicemia than of urethrotomy It must be gratifying to those in charge of the case to know that there is a fair prospect of the patient's recovery, which is a rather unusual termination in cases of general septicemia It would be interesting to trace the course of the infection, if this could be done we would know how these complications arise and take measures to prevent them

Dr Bloch said that the feature that interested him was the persistence of the sepsis after free drainage had been afforded by the operation There must have been a focus of infection in the shape of a deposit of pus somewhere He spoke of a case that Dr Michinard had shown him in his clinic The patient had pus tubes, the knees became the seat of a septic arthritis, and the patient died, as she was too weak to be operated upon

Dr McShane recalled a case that he had seen and dressed in Dr T G Richardson's service at the Charity Hospital in 1881 The patient was a negro, aged about 30 years, who had contracted gonorrhea, followed by septic arthritis of the right knee The joint was first aspirated, then incised, and drainage tubes inserted, but necrosis set in, and the man finally died of exhaustion

Dr Fenner, referring to Dr Bloch's remarks, said that he did not see how, in this case, there could have been any purulent focus, there was no room for it

Dr Gabert reported a case of abortion of three months The patient admitted that she had had some sort of a criminal operation performed on her and had also taken some medicine to bring on abortion She had some pretty severe hemorrhages, and she sent for him On examining the uterus through the speculum, he found two wounds in the lips of the organ He ordered antiseptic vaginal and intrauterine injections He thought, from the hemorrhages, that the uterine contents had been expelled, but, on the eighth day the ovum came out intact, sac and all He was surprised at that, since he had at first thought that in the attempt at abortion the ovum had been broken up and mutilated He thought that the hemorrhage must have come partly from the cavity of the body of the uterus and partly from the lacerated os

Dr Scheppegrell reported a case which he regretted to say, was incomplete He first saw the patient six months ago She then had some nasal stenosis, which the doctor relieved by operating on the septum She mentioned, at the time, that she had violent headaches, coming on at intervals of two or three weeks The pain radiated from the center of the head to the vertex During these headaches, her eyes and face were congested After the headache had lasted several days, it would become less intense, and suddenly, while the patient would be stooping forward, there would be a sudden gush of clear, straw-colored inodorous liquid from the nostrils This discharge would be followed by a complete cessation of all the symptoms

Feeling that the liquid must come from a well defined cavity and not from an oozing surface Dr Scheppegrell washed the antrum of Highmore on both sides, with negative results He punctured the ethmoidal sinus with the same results, and passed a trocar into both sphenoidal sinuses, but no liquid was obtained Instructed by the doctor, the patient collected some of the liquid for microscropic examination On Monday, Sept 4, 1893, the liquid gushed forth with its usual rapidity after several days of headache She caught some of it in her hands and poured it into a bottle which she kept ready This liquid was examined by Dr McShane, who found it to contain about 5 per cent of moist albumen Under the microscope it showed a small number of leucocytes and a multitude of pavement epithelial cells When the liquid was allowed to stand in a conical glass a rather heavy sediment deposited, which consisted principally of pavement epithelium, the cells of which were arranged singly and in groups Dr

Scheppegrell said that he was at a loss for a diagnosis of this case, and he laid the facts before the Meeting in the hope that some one else might have had some experience that would clear up his case All of the cavities accessory to the nasal cavity are lined in the columnar ciliated epithelium He had not yet been able to catheterize the frontal sinus

Dr Chassaignac suggested the possibility of hysteria, and means should be tried to ascertain same

Dr Scheppegrell said that the character and training of the patient were such as to preclude the possibility of such deception However, he would arrange matters so as to have the patient watched by a trained nurse, and thus settle beyond all doubt the nasal origin of the liquid

Dr Gassaway said that Dr Scheppegrell's case was unique as far as his reading goes In regard to Dr Fenner's case he said that he had never seen a case exactly like it at the Marine Hospital There were records of twenty urethrotomies with one death from fatty heart and old age Dr Fenner's patient may have had gonorrhea The Marine Hospital Service contains an abundance of such cases Gonorrheal rheumatism may occur two or three months after the gonorrhea is cured He has seen cases of gleet with stricture that developed gonorrheal rheumatism There are different views as to what constitutes gonorrheal rheumatism Gonorrheal cases are numerous It often happens that a man with gleet will flush out his urethra with urine before presenting himself at the clinic, and no evidence of the disease is seen at the examination Such cases may afterwards develop gonorrheal rheumatism In his service it is very unusual to have a temperature of over 38 degrees C (100 2-5 degrees F) after operations on the urethra

Dr Chassaignac did not think that Dr Gassaway's suggestion of gonorrhea in Dr Fenner's case was well founded His observations lead him to believe that a case under constant care would not develop the joint complications

Dr Gassaway did not mean to say that all cases of rheumatism developing after gonorrhea are really due to it Dr Gassaway also desired to call attention to the great rarity of true typhoid fever in New Orleans In all of the places in the Mississippi Valley in which he has been stationed in the last five years, he has seen only five cases of undoubted enteric fever In Philadelphia, about one third of all the cases seen at the Marine Hospital were of typhoid fever

Dr Gabert had a case of pleuro-pneumonia under treatment in the beginning of summer The man got well, and then he had an attack of true typhoid fever He got well again and then his sister (aged 14) took typhoid fever When she was convalescing her mother took the disease and died on the ninth day In the course of four months there were three cases of typhoid fever in one family

Dr Bloch thought a great many cases of typhoid fever were masked by the remedies used He had charge of four wards in the Charity Hospital, where he had a good opportunity for examining fever patients Good notes of the cases were kept Several patients and three autopsies were held These patients had not had any diarrhea, and yet the intestines showed the characteristic lesions of the disease and even perforation Death ensued from exhaustion due to the fever

Dr Parham had seen a number of cases of so called simple continued fever Dr Archinard had informed him that he had performed autopsies on a number of such cases while he was connected with the pathological department of the Charity Hospital He found the typical changes in Peyer's patches in a number of such cases There was no diarrhea, no parched tongue no petechiæ The subject is one of great importance to this community

Dr Chassaignac said that if Dr Gassaway referred to classical typhoid, he certainly had seen very little of it in New Orleans The disease is regarded as a rarity in the wards of the Charity Hospital All of the cases that he had seen were persons who had come from other places, where they had taken in the germs of the disease

Dr Gassaway said that both of the cases he had seen here had come from St Louis, Mo The disease developed while the patients were on the boat

Dr Fenner saw two cases in his ward for negro males They died two or three days after entering the hospital, at the autopsy, the characteristic changes in Peyer's patches were seen During his two years' service as a resident student in the Charity Hospital, he performed about sixty autopsies and in all of those he did not see any inflamed Peyer's patches

Dr Landfried said that while he was resident student at the Touro Infirmary he saw several cases of undoubted typhoid fever, and a great number of cases of continued fever He desired to speak on diphtheria He performed intubation in eight cases, all of them died His experience with intubation, even in apparently favorable cases, has been such as to make him feel that it is not a very valuable addition to our means of combating the disease He was compelled to look for something else, and he has adopted a plan of treatment which has given very gratifying results He uses peroxid of hydrogen in the following manner he makes a mixture consisting of Marchand's peroxid of hydrogen 3 parts, water 1 part, and a little bicarbonate of soda (about ten grains to the ounce) He fills a laryngeal syringe with this mixture Then he passes one index finger down to the arytenoid eminences as a guide, and slides the nozzle of the syringe, which is held in the other hand, down to the end of the fingers He then quickly squirts the liquid into the vestibule of the larynx, and flushes the larynx and the lower part of the pharynx This manipulation causes a brief dyspnea and great distress but the efforts at coughing thus provoked bring up large chunks of false membrane, and the breathing at once becomes easier From this on the patient continues to improve The nourishment of the child is also looked after After the larynx has been flushed out as above described the patient is able to swallow better

Dr Scheppegrell referred to a report on diphtheria recently published in the *New Orleans Medical and Surgical Journal*, in which it was stated that biniodid of mercury used internally had given excellent results He himself had used a solution of bichlorid sprayed into the larynx He treated about a dozen cases in this manner and lost three

Dr Lowe said that about three years ago he treated six cases of diphtheria in one family Dr H W Blanc, the then Chief Sanitary Inspector, saw all of the cases as they developed, and pronounced them diphtheria Dr Lowe used sprays of bichlorid of mercury (1-2000), lime water and peroxid of hydrogen in the different cases They are now all living

Dr Bloch said he had used a spray of peroxid in one case The child, aged 5 years died In another case he put lime in a basin and poured water over it and slaked it The child's head was held over the basin to cause him to inhale the fumes The child got well In another case it was necessary to advise tracheotomy, but the parents would not consent The child grew worse, and the parents permitted the operation, but it was too late, and the child died on the table

The Meeting then adjourned

Augustus McShane, M D , Secretary

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

Augustin H Goelet, M D , President

(*Concluded from page 788*)

The characteristics and special features of construction of the various meters submitted for examination are set forth with considerable regard to detail in the following statement

Description of Milliampere-Meters on Test by the Committee on Meters

Weston —These instruments are justly considered by the electrical profession as standard The permanent magnet is large, has soft iron pole-pieces, and the armature core is of soft iron and takes up nearly all the space between the pole pieces, acting practically as a "keeper," maintaining the magnet strength constant Two spiral springs, wound in opposite directions, keep the pointer normally at zero The armature is pivoted in fine jeweled bearings The indicating mechanism is the same in all the Weston meters, the different ranges being obtained by varying shunts These shunts are wound *differentially* on the *magnet* (and so give no magnetizing effect) and any heat that is developed is dissipated through the mass of the iron The scale is excellent, being the best of any submitted, and is legible at a considerable distance It is intended that this instrument be used *flat*, so that it may be necessary to use a reflector with it under some conditions This is also true of all but three of the meters on test Internal resistance is very low, being but 199 ohms in the instrument reading from 0 to 300 milliampères No special adjustment is necessary in setting up, the only care required being that the current flows through the instrument in the right direction External magnetic influences do not affect the instrument appreciably It is a very convenient instrument to carry about, and reasonable care will conduce to long life

Kennelly —These instruments have just been placed upon the market, and their accuracy and excellence of construction will place them in the very front rank of electrical measuring instruments They are supplied with a powerful permanent magnet with large flat superposed pole-pieces, one sixteenth of an inch apart, in which space revolves an aluminium disc on which are wound radially the armature coils Two differently wound springs hold the pointer at zero, as in the Weston, and the jeweled bearings of the suspension system are of the best The meter on test is not a shunt instrument and its resistance is very low Its scale is even throughout, but might be made more clear if laid out on the same plan as the Weston, and more convenient if divided into spaces of one milliampère from 0 to 25 Although this instrument may be used in any position, it is preferable that it be used *flat* as it is then more delicate It is uninfluenced by outside magnetic forces and is very sensitive to minute changes in amount of current passing through it, but in common with the Weston is practically "dead beat," coming directly to the correct position and remaining there It indicates with current passing in but one direction Put up in a handsome wooden case, it can be transported with ease, and is a very substantial and good all-around meter

Vetter —This instrument is of the upright galvanometer type, with needle attached to magnetized armature suspended within a coil through which the main current passes The scale is not very clear, even or finely divided, and requires close inspection for fine readings Its internal resistance is low, it must be leveled before using, it is sensitive to outside influences (magnetic) and the needle swings interminably before a reading can be taken In the instrument on test there are two scales, one of 25 milliampères and one of 250 milliampères, the latter made available by the use of a shunt It indicates with current passing in but one direction, but is a portable and fairly substantial instrument

Flemming —This instrument is also of the upright galvanometer type Its scale is far from convenient, reading up to 10 only, with shunt multiples of 10 and 100 It is extremely difficult to take a close reading above 10 milliampères Internal resistance is low, reading can be taken with current going either way, needs careful leveling suspension system is bad, is sensitive to outside magnetic influences, is portable and fairly substantial

Waite & Bartlett —This meter is of the horizontal galvanometer type and needs extreme care in leveling and adjusting Being suspended on a point, its needle is very sensitive to motion and external magnetic influences Its scale is uneven and difficult to read, being very close on highest and lowest readings Its shunt-multiple of 10 increases its range from 50 to 500 milliampères, and does not help its accuracy Internal resistance is low and indications are made in either direction, but it is not portable, is easily put out of order, and can be read in but one position

Queen —This handsome instrument combines many good points being arranged so that it may be read laying flat, or suspended vertically, or set at an angle It reads both ways, and its scale is clear and practically uniform Its mechanism comprises a compound permanent magnet between the poles of which is pivoted the armature coil through which the current to be measured passes The armature shaft is delicately geared to the needle shaft, and all bearings are jeweled In shipping the meter for test, Messrs Queen & Co apologized for the hasty manner in which the instrument had been assembled and tested, in order that it might enter into the test, as this type of meter is just being brought out for the market On arrival it was found to be three fourths of a milliampère off zero, and this was taken note of in the readings made from it Its internal resistance is low, it is portable and substantial, but is influenced to a slight degree by outside magnetic influences

Galvano Faradic —This meter is of horizontal galvanometer type and careful adjustment for level and zero is necessary The latter is rendered easy by the rotability of the dial part of the meter Being freely suspended on a point, its needle is very sensitive to motion and outside magnetic influences The scale is divided so as to indicate both ways, but the scale divisions are uneven and very small Internal resistance is very low and no shunt is employed This instrument is light in weight and is easily carried, but can readily get out of order

Gaiffe —This is also of horizontal galvanometer type, careful adjustment for level and zero being necessary It is very sensitive to motion and outside magnetic influences Its dial is of brass and is hard to read The scale is small and uneven and reads both ways It was hardly fair to put this little instrument in test with the others, as it has been in use at the Clinic for years, while all the others have been furnished for this test by the makers

The Test Proper

In making the comparative test of the meters, connection was made from twenty standard Leclanché cells of battery through a variable resistance to the meters These were, of course, all placed in series, so that the same current would pass through each, and the question of relative internal resistances would play no part Various instruments connected *singly* to the same number of elements would show *different* indications, according to the internal resistances of the several meters

The nine instruments tested were set up on a long table in the order in which they appear in the accompanying schedule showing the results obtained As great care was taken in removing disturbing magnetic influences as possible and those meters requiring it were carefully leveled and adjusted The proximity of the meters to each other affected some, unavoidably though unfortunately, on account of the magnetic influence they extended This is a strong argument against the use of such meters, however, as it is far from desirable that the operator should be obliged to consider whether his coils or other appliances are affecting the accuracy of his meter readings, vital as this accuracy is to his success

A scrutiny of the tabulated results of the test will show the remarkable closeness with which the Weston and Kennelly meters tallied throughout—remarkable as contrasted with the operations of some of the others The range of the Queen meter is to 50 milliampères only, and despite the disadvantages under which it labored, and which are mentioned above, it occupies a very honorable position

In the test for undue heating, the meters were divided into groups according to their ranges of scale, and each group was tested for three quarters of an hour at its highest capacity It is gratifying that a careful examination revealed no appreciable tendency in this undesirable direction in any of the meters

The Committee realizes the necessity that exists of having the Association adopt a standard meter, and believes such a standard could now be selected, and it is earnestly recommended that the Association take steps to this end The figures of the test speak for themselves

In adopting a standard meter, it is not only necessary that as an Association we should each and all use meters of the same make but that that meter should be a standard instrument, which when registering 5 milliampères in the hands of one person, will not register 5 and mean 7 with another Physiological experiments and clinical records are valueless so far as scientific accuracy is concerned without such a standard meter So far as your Committee have examined and tested them the Weston and Kennelly best fulfill these requirements

Resistance in Series with 20 Cells Leclanché Battery and Meters	Internal Resistance	Readings in Milliamperes										
		4800	2720	1710	1400	1050	650	475	310	220	136	91
Weston												
Scale 0 to 10	16 599	6	10									
0 to 600	.362			15	20	25	40	50	75	100	150	200
0 to 300	199	6	10	15	20	25	40	50	75¼	100½	153	201
Kennelly												
Scale 0 to 200	1 30	6	10	15	20	25	40	50	74¾	99½	149	199½
Queen	*	5¾	9½	15	20	25¾	43¾	52				
Vetter	*	6½	10¾	16	21	31	45	62	89	115	168	218
Flemming	*	5½	8½	15	20	28	36	46	68	88	160	220
Waite & Bartlett	130	6½	12	19½	24	36	50	65	89	120	195	210
Galvano Faradic	*	5¼	9	13	17	24	35	40	68	90	145	200
Gaiffe	*	5¼	8	13	17	25	34	40				

* Not given

In making this report, the Committee on Meters desires to express its sense of obligation to the following manufacturers for their courtesy in submitting samples of their apparatus for its inspection Weston Electrical Instrument Co, Newark N J, Edison Electric Manufacturing Co, (Kennelly) New York city, Messrs Waite and Bartlett, New York city, Messrs Queen & Co, Philadelphia, Mr Otto

Flemming, Philadelphia, Galvano-Faradic Co, New York city and J C Vetter & Co, New York city

[SIGNED] MARGARET A CLEAVES, Chairman
HERMAN E HAYD, M D
W J JENKS, Electrical Engineer

DISCUSSION

DR HERDMAN thought that two of the meters had not been sufficiently long on the market to enable one to draw correct conclusions, and he was of the opinion that the Association was not yet ready to adopt a standard meter The Committee should be continued

DR MORTON hoped a standard meter would be adopted this year In answer to a question as to the Gaiffe meter, he said it belonged to the horizontal type, which is easily disturbed, although no doubt quite accurate, electrical experts found this class not satisfactory It is very desirable sometimes to measure small current strengths accurately in for instance, metallic electrolysis Thus, in the urethra with 2 milliampères the instrument is movable, but with 5 milliampères the instrument may become strongly adherent, and the foundation laid for an organic stricture

DR C R DICKSON of Toronto, suggested adopting a standard of construction without mentioning any particular manufacturer's instrument He recalled a patient with an eye affection, who was sensitive to even one fifth of a milliampère

DR MORTON moved the adoption of the Kennelly meter

DR H E HAYD of Buffalo in seconding this motion, said the Committee's report was very complete and satisfactory, and there was no advantage in further procrastination

DR GEORGE J ENGLEMAN of St Louis, asked if the different purposes to which the meters are to be put had been considered by the Committee This he considered important, for a meter suitable for registering currents of 300 milliampères would hardly be very accurate for currents of only 2 to 5 milliampères He would like to know if any one meter would embody all these points

DR CLEAVES replied that the Kennelly meter was absolutely accurate in all portions of the scale

DR MASSEY thought it impossible for a long range meter to be accurate for small fractions of a milliampère We should have a meter for high currents and one for low currents

DR MASSEY then moved to amend Dr Morton's resolution as follows

Resolved, That this Association adopt the type of meter shown in the meters of Weston and Kennelly, and recommend them to the profession

DR MORTON said that a meter could be calibrated from very low fractions of a milliampère to 300 or 500 milliampères if desired, it was a mere detail of manufacture He did not consider it unnecessary discrimination to take the responsibility of discriminating between two meters

DR A LAPTHORN SMITH was in favor of indorsing the action of the Committee, and adopting the meter recommended in the report, provided it was not patented

DR HERDMAN said that the Committee had dealt with three meters of a certain type which they considered best The Association would probably agree with them that the galvanometer meter had many serious objections, and that the other type which they had examined has many disadvantages One of these meters had been on the market for many years, and had been used by many physicians who were therefore familiar with its good qualities The Kennelly meter was very similar in construction, but apparently more cumbersome Again, he had been informed that Mr Kennelly's meter was considered a legal infringement on the Weston meter It should not be forgotten also that another meter although hastily prepared for the tests, acted so well that it is justly entitled to a further opportunity of being tested The members of the Association individually should become familiar with these instruments before voting on the adoption of one or the other The Weston meter he had used for years, and considered excellent, but it is quite expensive, and this is a drawback, because whatever meter is adopted it should be generally used

DR FRANKLIN H MARTIN of Chicago, did not think the Association was yet prepared to state that the galvanometer meter should be legislated out of existence, and that it is not practicable to make such a meter as good as the other class of meter We should hardly recommend this meter which closely resembles the Weston meter, when the latter has been in the hands of many of us for many years If we should adopt a meter at all, and he did not approve of this, it should be the Weston meter The Association should not make itself a laughing stock of the profession by adopting the Kennelly meter until after more careful c sideration The speaker therefore suggested that the Co mittee be continued, and that they secure meters from al standard firms, whether these firms respond or not to the Committee's invitation

DR MORTON wished to declaim any personal interest in any one meter He predicted that this question of meters would not be finally settled within the next ten years, if the interests of the different manufacturers of meters were to be espoused by members

DR MASSEY then withdrew his amendment

On motion of DR NEWMAN, the report of the Committee was accepted, and the Chairman of the Committee continued

DR BISHOP then moved that the consideration of Dr Morton's motion to adopt the Kennelly meter should be postponed until the next meeting Carried

8 On Static Machines—DR W J MORTON reported that a number of questions had been sent out, but no response had been received The Committee recommended for the present, that electro static machines adapted to medical practice, should not have less than four revolving *glass* plates, whose diameters should *not* be less than twenty six inches

DR W B SPRAGUE of Detroit, asked why *glass* plates were specified

DR MORTON replied that it probably made but little difference, but ebonite had not been used very extensively In practice it had been found that this number of plates is necessary for obtaining a proper quantity or current strength

On motion, the report of the Committee was received, and the Committee continued

On Constant Current Generators and Controllers—DR W J HERDMAN made the report

REPORT OF THE COMMITTEE ON CONSTANT CURRENT GENERATORS AND CONTROLLERS, PROF W J HERDMAN, CHAIRMAN

The plan which the members of your Committee had in mind when this work was assigned to them was

1 To undertake to learn what methods were in use by physicians to supply themselves with continuous currents

2 To get the opinions of physicians regarding the methods they were employing

3 To put these statements and opinions to the proof by comparative tests in the laboratory,—employing in this work standard measuring instruments and subjecting the apparatus tested to conditions as nearly as possible identical with those that attend its use in the physician's office What has been done up to the present time is mainly in the line indicated under the third head, circumstances having conspired to delay the necessary correspondence which would furnish the information sought for from physicians usin continuous currents in their practice Very little progr was made by the Committee until the Executive Counc issued the circular of March 2, 1893, asking for the coopera tion of manufacturers, physicians and others in the work of this and other committees Since that circular was sent out the Committee has had no difficulty in getting such batteries and apparatus for test and examination as were thought desirable We have had the following primary batteries submitted for test by the manufacturers or dealers, and the work is still receiving daily attention according to the plan we have indicated

Law Battery (Law Bat Co, New York), 50 cells, Fitch Perfect Battery (Galvano-Faradic Co New York), 50 cells, Laclede Battery (L Carb & Electric Co, Ind), 50 cells, Leclanché Battery (Axo) (L Bat Co, New York) 50 cells, Partz Battery (No 5) (S S White Dental Mfg Co, Philadelphia), 50 cells, Partz Battery No 3, 30 cells, Edison LeLande (Edison Mfg Co, New York), 9 cells, Samson Battery, 2 cells

Dry Cells—Chloride of Silver Dry Battery, Baltimore, Md, 50 cells, Mesco Dry Battery, 2 cells, Ajax, 5 cells, Burnley, 2 cells

In every instance the manufacturers or dealers have be asked to furnish specific directions as to the proper mann of setting up and care of their batteries, and these dire tions have been rigorously carried out Physicians pu chasing batteries would receive and be guided by su directions and this course we have regarded as necessary in order to do no injustice to the form of battery under investigation We have neither attempted by any devices of our own to improve or detract from their efficiency

We herewith submit a record of these tests made to date in the larger plants furnished us The only battery containing a sufficient number of cells to be placed alongside of these here reported is that of the Chloride of Silver Co This has not been included for two reasons 1, it was received too recently for much work to have been done with it, and 2, it is a portable dry battery designed to meet peculiar needs and should, in our opinion, be reported in comparison with other portable batteries and not with stationary plants As to others that have been sent us and are not here reported, no one form has been sent in sufficient number to generate continuous currents of sufficiently high voltage for physicians' use We have stated to manufacturers and others that physicians as a rule require an electro motive force of *from fifty to seventy volts to accomplish* the work they are required to do in electro therapeutics

BATTERY TESTS MADE IN THE ELECTRO THERAPEUTICAL LABORATORY, UNIVERSITY OF MICHIGAN, SEPT 5, 1893

W J HERDMAN, DIRECTOR

Battery	Date	Initial Voltage	Resistance	Current	Time	Final Voltage	Volt Meter M A Meter	Remarks
Partz acid gravity	7-22-93	60	2600	027	30 m	53	Weston	(50 Cells)
"	8-15-93	57 6	1000	0385	15 "	56 6	"	"
"	8-16-93	57 5	1075	055	15	56	"	"
"	8-17-93	57 4	1224 92	057	10	56 1	"	"
"	8-18-93	57	2450 4	025	20	56 4	"	"
"	8-22-93	57 1	100	540	10 "	54 2	"	"
"	8-24-93	56 4	2250 47	025	10 "	56 6	"	" (Rise in E M F)
"	8-26-93	56 6	4700 87	012	5 "	56 3	"	"
"	8-29-93	56 3	1100 0	0045	20	56 1	"	"
"	8-30-93	56 5	2000	027	15 "	55 3		"
"	9-1-93	56 2	2000	025	15 "	55	"	"
Partz No 5	7-24-93	53	2400		15 "	49	"	(38 Cells)
	8-15-9	69 8	1600 2	044	15 "	62	"	*(50 Cells)*
"	8-16-93	69	3100	016	10 "	67 5	"	"
"	8-17-93	69	1225	004	3 "	69		"
"	"	69	1225	0445	10 "	61 3	"	"
"	8-18-93	68 8	2450	027	20 "	60	"	"
"	8-22-93	66 4	100	270	10 "	45		"
"	8-24-93	64 6	2250 68	0195	10 "	52 6	"	
"	8-26-93	66	4700 83	012	5 "	60 1	"	"
"	8-29-93	66	11000	0055	20	61	"	"
"	8-30-93	64	2000	031	15	54	"	"
"	9-1-93	63 8	2000	0335	15 "	52 2	"	"
Laclede	7-12-93	72 5	1000	065	10		"	"
	7-17-93	61 5	2600	025	10	60	"	"
"	"	68	140	400	10	59	"	"
"	7-24-93	67	1100		15	64	"	"
"	7-28-93	67	1800	038	30	50	"	"
	8-15-93	66 2	1600 1	0375	15 "	64 5	"	"
"	8-16-93	66	1075	056	15	63 2	"	"
"	8-17-93	65 9	1225	049	10	63	"	"
"	8-18-93	66 4	2450 92	024	20 "	64 4	"	"
"	8-22-93	65	100	550	10	52	"	"
"	8-24-93	64 5	2250 19	0175	10 "	62 6	"	"
"	8-26-93	65 4	4700	011	5 "	64 8	"	"
"	8-29-93	66 3	11000	005	20	65 8	"	"
"	8-30-93	64 4	2000	031	15 "	62.5	"	"
"	9-1-93	61 8	2000	067	15 "	60	"	"
Axo	7-28-93	75	200		30 "	60	"	"
"	8-15-93	76 4	1600 1	042	15	73 2	"	"
"	8-16-93	76	1075 92	062	15 "	71	"	"
"	8-17-93	75 8	1224 92	0645	10 "	71.8	"	"
"	8-18-93	75 6	2450	0325	20 "	73	"	"
"	8-22-93	76 5	100	570	10	70 1	"	"
"	8-24-93	75	2250 47	032	10	72 2	"	"
"	8-26-93	75 6	4700	015	5 "	74	"	"
"	8-29-93	75 4	11000	0055	20	74 3	"	"
"	8-30-93	75 5	2000	033	15	72	"	"
"	9-1-93	75	2000	0 5	15	74 2	"	"
Fitch	8-15-93	67 6	1600 1	038	15	6 4	"	"
	8-16-93	66 4	1075	067	15	64 6	"	"
"	8-17-93	66	1225	049	10 "	64 6	"	"
"	8-22-93	66 6	2450	0308	20 "	64		"
	8-22-93	65	100	500	2	61 5		"
"	8-24-93	61 5	2250 19	025	10 "	65 7	"	"
"	8-26-93	67	4700.87	0165	5	66	"	"
	8-29-9	67 [illegible]	11000	[illegible]	20 "	66 2		"
"	8-30-93	66	2000	031	15 "	62 6	"	"
"	9-1-93	64 3	2000	0305	15	63	"	"
Law	7-8-93	69	1000	060	10 "		"	"
"	7-15-93	69	2600	025	12	56	"	"
"	7-21-93	59.5	1100	055	15		"	"
"	8-15-93	67 8	1600	054	15 "	54 5		"
"	8-16-93	67	1075	064	15	49 3		"
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"	8-22-93	62 4	100	50	12 "	45 1	"	"
"	8-24-9	[illegible]	2250 47	[illegible]	10	60 8	"	
"	8-26-93	[illegible]7	4700	014	5	61	"	"
"	8-29-9	67 3	11000	0075	20	61 8	"	
"	8-30-93	66 9	2000	036	15 "	54		"
"	9-1-9	[illegible]	2000	[illegible]	15	60 2	"	"

We are engaged in testing the cells that have been sent to us in less number *than fifty for voltage*, current, recovery and constancy but it would be much more satisfactory if we had a *sufficient* number of each to put them upon such work as is actually done by physicians' batteries Only comparisons of this character are of much value in determining their efficiency for our use

Of current controllers and regulators, to be used in connection with primary battery currents, the Committee has received the following

Law Battery Co McIntosh Battery Plate for fifty cells *containing current selector, wire rheostat, and numerous* conveniences for controlling the current

Galvano Faradic Co Water rheostat of unique pattern, simple and convenient known as the Criado Rheostat

Chloride of Silver Co A special current selector and rheostat used in connection with their portable battery

Although each and all of these have been examined, somewhat, by *the Committee, and their action* noted in controlling the current, we are not yet prepared to formulate a report concerning them

With secondary batteries we have so far done nothing—none have been submitted to us for examination and no report has been received from the members of the Committee to whom this part of the work was specially assigned

The busy physician who knows the value of electricity in aiding *him to cope* with disease and who wishes to use it, finds himself greatly handicapped for want of the special knowledge of electro physics required, and the time and trouble necessary to keep his constant current apparatus *in good working condition,* if he is depending upon primary or secondary batteries as a source of current, and it is but natural that he should cast about for some method by which he could rid himself of these annoyances and still retain the advantages of this aid to his therapeutic work In commercial work, the dynamo has so largely superseded all other sources of electric generation that the thoughts of the physician have also turned to it for his supply, and many ingenious contrivances are being devised to control and adapt these currents to his needs The first *questions* that ought, in the natural order, to be settled before further attempts are made *in this direction* are, what is the physiologic action upon the human body of these currents? and does a constant current generated *from a* dynamo act similarly upon the living animal tissues *to a* constant current of equal amount and pressure generated from a primary or secondary battery? These questions are fundamental and should receive an early reply from the physiologist and the electro therapeutist The latter, are already engaged in interrogating *these currents in many places* where they are available, and already the incandescent light current, the street car current and the current furnished at a central station for various commercial purposes are finding their way into physicians' offices and in one or another way are being adapted to their uses The convenience of such a source of supply of electricity to physicians *is self evident* We, therefore, as a Committee, look with interest and expectancy to the devices that are being constructed with the view of aiding the physician to utilize these currents Several of these have been placed *in the* Committee's hands for *investigation*, and their range of efficiency is now being *determined* Those deserving mention are

The Gish Ideal Rheostat, the Vetter Current Adapter; the Knapp Rheostat, the K A P Rheostat, the McIntosh Hydro Platinum Rheostat, and the McIntosh Current Controller

If sufficient time had been given us we would have been pleased to furnish to the Association a description of these instruments, and an outline of the *character of work they* each can accomplish, for it seems to us that this is the trend electro therapeutic apparatus is destined to follow. One peculiar form of apparatus has been sent to the Committee for investigation within the past two weeks, *but we have* not yet had the opportunity to examine it It is an arrangement devised by Dr Meeker of Newark, N J, for subjecting the body to the action of electric light for *curative purposes* Large claims are made by its inventor for its *therapeutic efficiency* This is an interesting field for investigation, though the work may be a little out of the line of that assigned to this Committee The action of the electric light *in modifying the conditions of the* animal organism is an interesting field for research, and we are disposed *to recommend* the appointment of a special committee to take this work in charge If such *a committee* is appointed we would take pleasure in transferring to it th apparatus of Dr Meeker

The plan of this Committee as it was outlined at t beginning of this report you can readily see contemplat the expenditure of much time and labor and as *no funds*

Flemming, Philadelphia, Galvano-Faradic Co, New York city and J C Vetter & Co, New York city

[signed] Margaret A Cleaves, Chairman
Herman E Hayd, M D
W J Jenks, Electrical Engineer

Discussion

Dr Herdman thought that two of the meters had not been sufficiently long on the market to enable one to draw correct conclusions, and he was of the opinion that the Association was not yet ready to adopt a standard meter The Committee should be continued

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Dr Morton moved the adoption of the Kennelly meter

Dr H E Hayd of Buffalo in seconding this motion, said the Committee's report was very complete and satisfactory, and there was no advantage in further procrastination

Dr George J Engleman of St Louis, asked if the different purposes to which the meters are to be put had been considered by the Committee This he considered important, for a meter suitable for registering currents of 300 milliampères would hardly be very accurate for currents of only 2 to 5 milliampères He would like to know if any one meter would embody all these points

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Dr Massey then moved to amend Dr Morton's resolution as follows

Resolved, That this Association adopt the type of meter shown in the meters of Weston and Kennelly, and recommend them to the profession

Dr Morton said that a meter could be calibrated from very low fractions of a milliampère to 300 or 500 milliampères if desired, it was a mere detail of manufacture He did not consider it unnecessary discrimination to take the responsibility of discriminating between two meters

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Dr Massey then withdrew his amendment

On motion of Dr Newman, the report of the Committee was accepted, and the Chairman of the Committee continued

Dr Bishop then moved that the consideration of Dr Morton's motion to adopt the Kennelly meter should be postponed until the next meeting Carried

3 On Static Machines—Dr W J Morton reported that a number of questions had been sent out, but no response had been received The Committee recommended for the present, that electro static machines adapted to medical practice, should not have less than four revolving *glass* plates whose diameters should not be less than twenty six inches

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Dr Morton replied that it probably made but little difference, but ebonite had not been used very extensively In practice it had been found that this number of plates is necessary for obtaining a proper quantity or current strength

On motion, the report of the Committee was received, and the Committee continued

On Constant Current Generators and Controllers—Dr W Herdman made the report

Report of the Committee on Constant Current Generators and Controllers, Prof W J Herdman, Chairman

The plan which the members of your Committee had in mind when this work was assigned to them was

1 To undertake to learn what methods were in use by physicians to supply themselves with continuous currents

2 To get the opinions of physicians regarding the methods they were employing

3 To put these statements and opinions to the proof by comparative tests in the laboratory,—employing in this work standard measuring instruments and subjecting the apparatus tested to conditions as nearly as possible identical with those that attend its use in the physician's office What has been done up to the present time is mainly in the line indicated under the third head, circumstances having conspired to delay the necessary correspondence which woul furnish the information sought for from physicians usi continuous currents in their practice Very little progr was made by the Committee until the Executive Counc issued the circular of March 2, 1893, asking for the coöpera tion of manufacturers, physicians and others in the work of this and other committees Since that circular was sent out the Committee has had no difficulty in getting such batteries and apparatus for test and examination as were thought desirable We have had the following primary batteries submitted for test by the manufacturers or dealers, and the work is still receiving daily attention according to the plan we have indicated

Law Battery (Law Bat Co, New York), 50 cells, Fitch Perfect Battery (Galvano-Faradic Co New York), 50 cells, Laclede Battery (L Carb & Electric Co, Ind), 50 cells, Leclanché Battery (Axo) (L Bat Co, New York) 50 cells, Partz Battery (No 5) (S S White Dental Mfg Co, Philadelphia), 50 cells, Partz Battery No 3, 30 cells, Edison LeLande (Edison Mfg Co, New York), 9 cells, Samson Battery, 2 cells

Dry Cells—Chloride of Silver Dry Battery, Baltimore, Md, 50 cells, Mesco Dry Battery, 2 cells, Ajax, 5 cells, Burnley, 2 cells

In every instance the manufacturers or dealers have be asked to furnish specific directions as to the proper mann of setting up and care of their batteries, and these dire tions have been rigorously carried out Physicians pu chasing batteries would receive and be guided by su directions and this course we have regarded as necessary in order to do no injustice to the form of battery under investigation We have neither attempted by any devices of our own to improve or detract from their efficiency

We herewith submit a record of these tests made to date on the larger plants furnished us The only battery containing a sufficient number of cells to be placed alongside of these here reported is that of the Chloride of Silver Co This has not been included for two reasons 1, it was received too recently for much work to have been done with it, and 2, it is a portable dry battery designed to meet peculiar needs and should, in our opinion, be reported in comparison with other portable batteries and not with stationary plants As to others that have been sent us and are not here reported, no one form has been sent in sufficient number to generate continuous currents of sufficiently high voltage for physicians' use We have stated to manufacturers and others that physicians as a rule require an electro motive force of from fifty to seventy volts to accomplish the work they are required to do in electro therapeutics

BATTERY TESTS MADE IN THE ELECTRO THERAPEUTICAL LABORATORY, UNIVERSITY OF MICHIGAN, SEPT 5, 1893

W J HERDMAN DIRECTOR

Battery	Date	Initial Voltage	Resistance	Current	Time	Final Voltage	Volt Meter M A Meter	Remarks
Partz ac'd gravity	7-22-93	60	2600	027	0 m	53	Weston	(30 Cells)
	8-15-93	57 6	1600	0385	15	56 6	"	"
"	8-16-93	57 5	1075	055	15	56	"	"
"	8-17-93	57 4	1224 92	057	10	56 1	"	
"	8-18-93	57 5	2450 4	025	20	56 4	"	"
"	8-22-93	57 1	100	340	10 "	55 2	"	"
"	8-24-93	56 4	2250 47	025	10	56 6	"	" (Rise in E M F)
"	8-26-93	56 6	4700 87	012	5 "	56 5	"	"
	8-29-93	56 3	1100 0	0045	20	56 1	"	"
"	8-30-93	56 5	2000	027	15	55 3		"
"	9-1-93	56 2	2000	028	15	55	"	"
Partz No 5	7-21-93	53	2400		15 "	49	"	(38 Cells)
"	8-15-93	69 8	1600 2	014	15	62	"	(50 Cells)
"	8-16-93	69	3100	016	10 "	67 5	"	"
"	8-17-93	69	1225	004	3	69		"
"	"	69	1225	0445	10	61 3	"	"
"	8-18-93	68 8	2450	027	20	60	"	"
"	8-22-93	66 4	100	270	10 "	45	"	
"	8-24-93	64 6	2250 68	0195	10 "	52 6		
"	8-26-93	66	4700 83	012	5	60 1	"	"
"	8-29-93	66	11000	0055	20	61	"	"
"	8-30-93	64	2000	031	15	54	"	"
"	9-1-93	63 8	2000	0335	15 "	52 2	"	"
Laclede	7-12-93	72 5	1000	065	10 "			"
	7-17-93	61.5	2600	025	10	60	"	"
"		68	140	400	10	59	"	"
"	7-24-93	67	1100		15	64	"	"
"	7-28-93	67	1800	038	30	50	"	"
"	8-15-93	66 2	1600 1	0375	15	64.5	"	"
"	8-16-93	66	1075	056	15	63 2	"	"
"	8-17-93	65 9	1225	049	10	63	"	"
"	8-18-93	66 4	2450 92	024	20 "	64 4		"
	8-22-93	65	100	.550	10	52	"	"
"	8-24-93	64 5	2250 19	0175	10	62 6	"	"
"	8-26-93	65 4	4700	011	5 "	64 8	"	"
"	8-29-93	66 3	11000	005	20	65 8	"	"
"	8-30-93	64 4	2000	031	15 "	62 5	"	"
"	9-1-93	61 8	2000	067	15 "	60	"	"
Axo	7-28-93	75	200		30 "	60	"	"
"	8-15-93	76 4	1600 1	042	15	73 2	"	"
"	8-16-93	76	1075 92	062	15 "	71	"	"
"	8-17-93	75 8	1224 92	0645	10 "	71.8	"	"
"	8-18-93	75 6	2450	0325	20 "	73	"	"
"	8-22-93	76 5	100	370	10	70 1	"	"
"	8-24-93	75	2250 47	032	10	72 2	"	"
"	8-26-93	75 6	4700	015	5 "	74	"	"
"	8-29-93	75 4	11000	0055	20 "	74 3	"	"
"	8-30-93	75 8	2000	035	15	72	"	"
"	9-1-93	75	2000	0 5	15	74 2	"	"
Fitch	8-15-93	67 6	1660 1	038	15 "	65 4	"	"
	8-16-93	66 4	1075	067	15	64 6	"	"
"	8-17-93	66	1225	049	10	64 6	"	"
"	8-22-93	66 6	2450	0308	20	64	"	"
"	8-22-93	65	100	500	2	61 5	"	"
"	8-24-93	61 5	2250 19	025	10 "	65 7	"	"
"	8-26-93	67	4700 87	0165	5	66	"	"
	8-29-93	67 3	11000	0055	20	66 2	"	
"	8-30-9	66	2000	0 1	15 "	62 6	"	"
"	9-1-93	64 3	2000	0305	15	63	"	"
Law	7-8-93	69	1000	060	10 "			"
"	7-15-93	69	2600	025	12	56	"	"
"	7-21-93	59 5	1100	055	15		"	"
"	8-15-93	67 8	1600	054	15 "	54 5	"	"
	8-16-93	67	1075	064	15	49 5		"
	8-17-93	66 1	1225	062	10	50 4	"	"
"	8-22-93	6[illegible] 1	2450 4	0425	20 "	54	"	"
"	8-22-93	62 4	100	580	12	45 1		"
"	8-24-9	[illegible] 3	2250 47	036	10	60 8		"
"	8-26-9	67	4700	014	5 "	61	"	"
"	8-29-93	67 [illegible]	11000	0015	20 "	61 8	"	"
"	8-30-9	66 9	2000	056	15 "	54		"
"	9-1-9	64 6	2000	025	15	60 9	"	"

We are engaged in testing the cells that have been sent to us in less number than fifty for voltage, current, recovery and constancy, but it would be much more satisfactory if we had a sufficient number of each to put them upon such work as is actually done by physicians' batteries Only comparisons of this character are of much value in determining their efficiency for our use

Of current controllers and regulators, to be used in connection with primary battery currents, the Committee has received the following

Law Battery Co McIntosh Battery Plate for fifty cells containing current selector, wire rheostat, and numerous conveniences for controlling the current

Galvano Faradic Co Water rheostat of unique pattern, simple and convenient known as the Criado Rheostat

Chloride of Silver Co A special current selector and rheostat used in connection with their portable battery

Although each and all of these have been examined, somewhat, by the Committee, and their action noted in controlling the current, we are not yet prepared to formulate a report concerning them

With secondary batteries we have so far done nothing—none have been submitted to us for examination and no report has been received from the members of the Committee to whom this part of the work was specially assigned

The busy physician who knows the value of electricity in aiding him to cope with disease and who wishes to use it, finds himself greatly handicapped for want of the special knowledge of electro physics required, and the time and trouble necessary to keep his constant current apparatus in good working condition, if he is depending upon primary or secondary batteries as a source of current, and it is but natural that he should cast about for some method by which he could rid himself of these annoyances and still retain the advantages of this aid to his therapeutic work In commercial work, the dynamo has so largely superseded all other sources of electric generation that the thoughts of the physician have also turned to it for his supply, and many ingenious contrivances are being devised to control and adapt these currents to his needs The first questions that ought, in the natural order, to be settled before further attempts are made in this direction are, what is the physiologic action upon the human body of these currents? and does a constant current generated from a dynamo act similarly upon the living animal tissues to a constant current of equal amount and pressure generated from a primary or secondary battery? These questions are fundamental and should receive an early reply from the physiologist and the electro therapeutist The latter, are already engaged in interrogating these currents in many places where they are available, and already the incandescent light current, the street car current and the current furnished at a central station for various commercial purposes are finding their way into physicians' offices and in one or another way are being adapted to their uses The convenience of such a source of supply of electricity to physicians is self evident We, therefore, as a Committee, look with interest and expectancy to the devices that are being constructed with the view of aiding the physician to utilize these currents Several of these have been placed in the Committee's hands for investigation, and their range of efficiency is now being determined Those deserving mention are

The Gish Ideal Rheostat the Vetter Current Adapter; the Knapp Rheostat, the K A P Rheostat, the McIntosh Hydro-Platinum Rheostat, and the McIntosh Current Controller

If sufficient time had been given us we would have been pleased to furnish to the Association a description of these instruments, and an outline of the character of work they each can accomplish, for it seems to us that this is the trend electro therapeutic apparatus is destined to follow. One peculiar form of apparatus has been sent to the Committee for investigation within the past two weeks, but we have not yet had the opportunity to examine it It is an arrangement devised by Dr Meeker of Newark, N J, for subjecting the body to the action of electric light for curative purposes Large claims are made by its inventor for its therapeutic efficiency This is an interesting field for investigation, though the work may be a little out of the line of that assigned to this Committee The action of the electric light in modifying the conditions of the animal organism is an interesting field for research, and we are disposed to recommend the appointment of a special committee to take this work in charge If such a committee is appointed we would take pleasure in transferring to it this apparatus of Dr Meeker

The plan of this Committee as it was outlined at the beginning of this report you can readily see contemplates the expenditure of much time and labor and as no funds have been placed at its disposal it must be a labor of love, and unselfish devotion to the interests we have in charge If it is thought best by the Association to continue the duties of this Committee, it should be constituted of persons whose hearts are in the work and who are willing to give a large share of their personal attention to it

DR BISHOP moved that the report be accepted, and the Chairman of the Committee continued Carried

V —ON ELECTRODES

DR A LAPTHORN SMITH read the report of the Committee of the American Electro Therapeutic Association on standard electrodes

Mr President and Fellows —Your Committee has realized the fact that much of the diversity of results obtained by a given method of applying electricity to a certain diseased condition depends upon the variety of instruments employed and the lack of any standard of size or shape of electrode upon which much of the good result depends For suitable electrodes, for the application of the current at the active pole and its diffusion at the indifferent pole are among the fundamental requirements for successful electro therapy We have excellent standards of quantity and intensity which are accepted all over the world, and it is equally desirable that we should have standard electrodes, the mere mention of which would mean the same thing in every land It is also very desirable that electrodes, as indeed all other electrical apparatus, should be simplified and their manufacture and maintenance cheapened without, however, at all impairing their efficiency Many practitioners have no doubt, abandoned the use of electricity, not because they were dissatisfied with what it could do for them, but because their apparatus has got out of order, and the productions of each manufacturer differing in size, he has been unable to have it repaired without sending it at great expense to the particular manufacturer who produced it If all parts were made interchangeable and of uniform sizes the nearest manufacturer could supply missing parts from stock at a cost very often of as many cents as it would otherwise cost dollars With one size of the same material only 50 ma can be borne, while with another size a dose of 250 is possible With one size the result is successful with the other it is failure At the last meeting, there was such a general consensus of opinion that some standard sizes and makes of electrodes should be adopted, that a committee was appointed to report upon the matter at this meeting Since commencing their investigations, the committee has received valuable assistance from Dr Waite of New York, from Mr Ness, electrical manufacturer of Montreal, and from many others, and has observed abundant proof of the interest centering in its work

After some correspondence between the several members of the Committee, it was decided that the following points should be considered

I —INACTIVE ELECTRODES

1 What is the best material in general for the groundwork of the electrode, and what in special cases?

2 How may it best be connected with its rheophore?

3 What is the best material for covering its conducting surface?

4 When necessary how may it best be insulated?

5 In what way may it be kept warm and moist when not in use should this be necessary?

6 What should be accepted as standard sizes and shapes and how best may they be designated?

7 What other points require to be considered?

II —ACTIVE ELECTRODES

1 What is the best material in general and in special for the ground work of the electrode? *a* When used at the positive pole? *b* When used at the negative pole?

2 How may it best be connected with its rheophore?

3 What is the best material to cover its connecting surface when necessary, in general and in special cases?

4 How may it be insulated when necessary?

5 What is the best form of construction where flexibility is required for tortuous canals?

6 What shall be considered the standard shapes and sizes? What scale shall be adhered to when considering the matter, how may their surface area be estimated when they are of irregular shape?

7 When designated by numerals as to size and surface, how may such best be expressed when stamped or otherwise marked on them?

8 How may simplicity of construction best be obtained and cost of manufacture reduced without impairing efficiency?

9 How may facility of cleansing and rendering aseptic best be achieved?

10 What other points to be considered?

III —ACTIVE AND INACTIVE ELECTRODES

1 Are the terms, active and inactive, the best standard terms we can employ?

2 In the case of both active and inactive electrodes, should not the thread of all screws used in construction as means of attachment, also all plugs and sockets, etc, be of a standard gauge, that electrodes might be used with attachments of all makes, etc, and to facilitate repair? We have come to the conclusion that the best material for the groundwork of electrodes is copper wire gauze, because it possesses sufficient firmness to support the conducting material, and also because it is sufficiently pliable to mold itself to the inequalities of the tegumentary surface, which is not the case with lead or zinc plates It also offers a good surface to which the binding post or conducting wire can be soldered We think that this material would meet the requirements for a groundwork for a dispersing or inactive electrode in every possible case

How may it best be connected with its rheophore? In order that the rheophore may carry the current from every part of the electrode the best way to connect the latter to the former is by means of a bright copper wire, soldered over the whole of its length to the previously brightened wire gauze, with which it should be in contact the whole width of the electrode, thus insuring active contact with a great number of the wires of its mesh The copper wire should terminate in a binding post to which it should be firmly soldered and which binding post should be of the size known as No 6-32, which is largely used by telephone companies throughout the world, and which we recommend as the standard screw for all electrical apparatus so that if the screw be lost it could be easily replaced without changing the binding post We also recommend that the ordinary tips of binding cords be abandoned and replaced by screw contact posts on all electrodes

3 The best material for covering the conducting surface of the dispersing electrode is a layer of white, sculptors' clay, half an inch thick, moistened to the consistency of soft putty It is desirable that the conducting material should part with its water only enough to moisten the epidermis, but not enough to wet the patient's clothes This requirement renders absorbent cotton sponge punk pans of water covered with animal membrane objectionable After having considered the claims of all other substitutes for clay, we have come to the conclusion that the latter is the only substance which can be rendered moist enough to conduct without wetting the clothes When covered with a layer of lintine and one of absorbent gauze it does not soil the skin nor clothes Its surface can be kept clean by sponging it over with soapsuds before each application The copper wire gauze groundwork or backing can best be insulated with common table oilcloth a little larger than the wire gauze, to the edge of which the layers of absorbent cotton can be stitched all around

This material can best be kept warm and moist when not in use in the following manner a zinc pan, one foot wide, a foot and a half long and three inches deep, is made with four stout wire feet in order to raise it eight inches from the ground This is half filled with hot water, and a small sized Bunsen's burner is placed under it, which is turned so low as never to raise the water over 100 degrees F A perforated zinc tray is placed an inch above the level of the water on which the electrodes are kept face downwards The slight evaporation from the water will keep them always moist, warm and ready for use Another expedient is the hot water bottle, already widely known It is greatly to be desired that standard sizes be adopted, we find that after experimenting and having consulted with others of great experience that three sizes of dispersing electrodes would accomplish all the purposes for which this electrode is ever required They should all be one foot long, while the widths should be respectively three six and nine inches, thus three of them could lie side by side in the above mentioned trays, they would give the following surface areas No 1, 36 square inches No 2, 72 square inches, and No 3 108 square inches[1] With the latter, 250 ma, which is the highest strength ever required, can be easily borne without burning the skin

(To be continued)

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[1] We recommend that the metric system should be used throughout and the above mentioned converted thereto

The New London Medical Society Does not take a Back Seat *Editor Bulletin* —My attention has been directed to an article appearing in your columns a few days since, the writer of which seems to have been laboring under misapprehensions that will bear correcting

As the author of the original article, a notice of which was honored by being copied from your columns into those of The Journal of the American Medical Association, and taken exception to by Dr E L B Godfrey of Camden, N J, I will state that no claim was made for the profession in New London County as priority in taking the initiatory step toward professional organization, excepting as confined within the colony of Connecticut

But as Dr E L B Godfrey has seen fit to champion the cause of the New Brunswick (N J) Medical Association by casting his gauntlet into the Connecticut arena, it gives me pleasure to return him the same upon the point of the following statement The original paper referred to as being signed by the Norwich physicians is ' Dated at Norwich the 27th day of Sept, 1763," nearly three years before the New Brunswick rally called for by the advertisement in *The New York Mercury* bearing date of " East New Jersey, June 27th, 1766 "

In behalf of the New London County Medical Association we do not feel like accepting the suggested back seat unless proffered in a chronological sense . Respectfully

Julian La Pierre

—*Norwich* (Conn) *Bulletin,* Nov 15

NECROLOGY

Dr Louis Reinhard of Milwaukee, November 20

Dr J Frank P Sher, of Philadelphia, November 15

Dr C S O'Brien, of Bloomsburgh, Pa , November 16

Dr John Frissell, of Wheeling, West Va , November 15, aged 84

Dr D J Cummings, at Farmington, Minn , aged 75, November 9

Dr E S Cooper, one of the oldest physicians in the State, died at his home Galesburg, Ill , aged 76 years He had been a resident of Galesburg for fifty years

Dr W A Pugh, died at Rushville, Ind , after a week's suffering He was stricken with paralysis, November 6, gradually sinking until the end Dr Pugh was born in Rushville, March 7 1829

Dr Addison Dold of Augusta County Md , died November 8 near Tinkling Spring He was more than four score years of age, and was formerly a practicing physician

Dr Henry Chester Parry, died at Towigsburg, Pa , November 8 He was a son of the late Judge Edwin Owen Parry, and served as surgeon in the United States Navy He was retired several years ago He was a man of culture and high literary tastes

Dr J C Murray, died at his residence, "Cedar Park," near Annapolis, November 11 Dr Murray was in his seventy-eighth year, and has resided in Anne Arundel County all his life with the exception of some years previous to and during the war

Dr Leon Le Fort, who died at Paris, October 19, was a professor of clinical surgery, and a popular author on military and naval hygiene, and the management of hospitals He was joint author with Malgaigne of a text-book on operative medicine Some of his brochures were honored by foreign reproduction He visited America as a delegate to the Ninth International Congress

Dr Eugene Horwitz of Baltimore, Md , died at his home November 10 He had pneumonia, which attacked him while on his return from the World's Fair some days ago Dr Horwitz was born in Philadelphia, December 7, 1863, at the residence of his grandfather, the celebrated surgeon, Samuel D Gross In accordance with his expressed wish, his body will be cremated at the Loudon Park Crematory

Dr A P Meylert, 51 years old, died in Wilkesbarre, Pa , November 11 He was born in Laporte, Sullivan County He was educated at the University of Lewisburg and afterward entered the College of Physicians and Surgeons in New York, where he was graduated Soon after the breaking out of the civil war he was appointed Medical Director of the Army of Ohio under General Sherman, on whose staff he was during all his campaigns

Dr John M Keating, LL D , formerly of Philadelphia, a physician and medical author of national reputation, died at Colorado Springs November 17 In 1879 he was a member of General Grant's party on a visit to India and Southern Asia He is best known to the profession by his editorship of the " Cyclopedia of the Diseases of Children " He was the founder and one of the editors of the *International Clinics and of the Climatologist*

Dr W S Leach, of St Joseph, Mo , the oldest physician in the city, died November 21 Before the war he was the largest slave holder in the State He was a very eccentric man, and after his slaves were liberated erected little shanties all over the city which he rented to them for a few dollars a month Many of these houses are still standing on land worth hundreds of dollars a foot and occupied by some of his old slaves or their descendants

Dr Wm Haslet Clendinen, Jr , of Baltimore, who died at the age of 60 years was the son of a Maryland physician bearing the same name He was an alumnus of the University of that State, class of 1850 As quarantine physician from 1862 to 1865 he passed through peculiarly arduous experiences on account of an epidemic of smallpox among the soldiers of the Union Army under his charge and received public commendation for his fidelity and energy He was Assistant Surgeon, with the rank of Major, until the close of the war He was the founder of the St Barnabas Church Dispensary, and conducted it for two years

Dr Charles Warrington Earle, President of the Chicago Medical Society, died at his home in Chicago, November 19

He was born in Westford, Vt , April 2, 1845, and removed to Illinois with his parents in 1854 At the age of 16 he enlisted in the 15th Illinois, was injured while loading a transport In ten months he recovered and reenlisted in the 96th Illinois, was made Sergeant and promoted to be First Lieutenant Shortly after the battle of Chickamauga he was taken prisoner, while serving in General Gordon Granger's division His bravery and gallant action in battle was the subject of compliment, and he was one of the famous band of prisoners that escaped from Libby Prison through a tunnel He returned to his company and served in the battles of Resaca, Kenesaw Mountain Atlanta, Franklin and Nashville He was brevetted Captain for bravery in the engagements named

After the war, he entered Beloit College, Wis , where he remained three and a half years, after which he entered Chicago Medical College and was graduated therefrom in the class of 1870

He was once President of the Illinois State Medical Society, and at the time of his death President of the Chicago Medical Society, Dean of the Woman's Medical College, President of the Board of Directors and a Professor in the College of Physicians and Surgeons of Chicago

His good fellowship made him an agreeable companion everywhere, and he was a member of a great many local societies In person he was impressive, and deservedly popular His death leaves a vacancy in Chicago medical circles that will be difficult to fill"

The funeral took place Nov 22, 1893, and was attended by representatives of the medical colleges and societies of the city

Dr D Scott Moncrieff —In the Journal of October 28, we announced the death of Dr D S Moncrieff by drowning in the Gulf of Tartary

Something more than a passing notice is due the memory of this scientific physician We have been furnished the following

"Dr Moncrieff was born in Edinburgh, Scotland, on the 9th of February, 1865 He was the younger son of D Scott Moncrieff, Esq, W S, Edinburgh He was educated at the principal schools and colleges in Great Britain, having also passed a two years' course at Leipsic, Germany He also took his M D degree at Harvard in 1889 He was an apt student, and came out of his studies with flying colors Dr Moncrieff was a good athlete, and obtained many prizes while pursuing his studies He held the Royal Humane Society's medal for saving a man's life who had fallen over board while the steamer was about to sail

His professional career started in with the appointment of Surgeon to the Anchor line steamer *Armenia*, plying between England and Calcutta He next acted as Surgeon on the *Ethiopia*, of the same line, which sailed between Glasgow and New York From there he was appointed as Surgeon in the Northwest mounted police in Canada Leaving that place Dr Moncrieff came to Portland, and soon after he was appointed as Acting Assistant Surgeon to the Fourth Cavalry Regiment, stationed at Walla Walla While here he did a great deal of important work among the Indians at the different reservations Last, he was requested by Professor Putman, Chief of the Department of Ethnology at the World's Fair, to go to Siberia to gather statistics and study the habits of the natives of Kamschatka He received a special passport from the Secretary of State, besides several influential letters from important officers of the Russian Government in this country Dr Moncrieff left on the steamer *Kotic*, in May last, and reached Vladivostock, where he met with a royal reception from the people, besides receiving every assistance in his work Everything pointed to a successful termination of his mission when his young life was suddenly cut short The news was received with much regret, as Dr Moncrieff was a favorite with every one that came in contact with him He was an exceedingly bright young man, and very able in his profession, being Assistant Professor of Theory and Practice of Medicine in the Medical Department of the University of Oregon

MISCELLANY

New Hospital —A new hospital is to be established at Macon, Ga, and one at Oil City, Pa

Dr W P White has been appointed Health Officer for Louisville, vice Dr Galt, deceased

Typhus Fever prevailed to an alarming extent in Zacatecas Mexico, during the summer months just closed

The Bill to Establish a State Board of Health in Georgia is opposed by Dr Harris, and by Dr Brunner of the Savannah Board

Changes of Address —Dr James M Ayers to 164 Plum Street, Cincinnati

Dr Vincent L Hurlbut to Grand Pacific Hotel, Chicago

Yellow Fever —Thirteen new cases of yellow fever and one death therefrom were reported at Brunswick, Ga, on November 8, twelve new cases November 11, and five new cases November 12

To Have an Addition —The trustees of the Massachusetts State Insane Asylum, have voted to use the appropriation of $50,000 passed by the last Legislature for the purpose of erecting an addition which will accommodate fifty patients

A Banquet to Dr Pozzi —A farewell banquet was tendered the eminent Parisian Professor on his way through New York The host was Dr Paul F Mundé, and the feast was served at the Union League Club Among the other guests were many leading gynecologists and surgeons, Drs T G Thomas, Lusk, Wyeth, Jacobi, Mann, Loomis and the officers of several medical organizations

Dr Roswell Park of Buffalo —The well-known Professor of Surgery at Buffalo, has been sick with diphtheria, in consequence of contracting the disease from a patient on whom he had been called to operate Dr Park has our profound sympathy and our best wishes for his recovery from this disease, which has been of late markedly fatal among his surgical confrerès

Honorary Appointments —At the session of the Société Française D'Hygiène of Paris, held Oct 13 1893, among other appointments we notice that Medical Director Albert L Gihon, U S N, Surgeon General Sternberg, U S A, and Dr J H Kellogg were made Honorary Members, and Dr Chas A Oliver of Philadelphia, Dr Francis Dowling of Cincinnati, Dr Frederick Montizambert of Quebec, Dr E Liceago of Mexico, and Dr Rafael Lavista of Mexico, were made Foreign Associate Members

Fatal Floods in Japan —A press dispatch from Vancouver, B C, Nov 22, states The steamer *Empress of China* arrived from Yokohama bringing advices that floods devastated the harbor of Nagasaki and did considerable damage as far as Yokohama and Tokio In Okayarua prefecture 167 lives were lost and 2,400 houses destroyed In Yamosquohi prefecture 320 fishermen were drowned, while large numbers of unrecognized bodies drifted ashore

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from November 11 1893 to November 17 1893

Capt Henry P Birmingham Asst Surgeon U S A leave of absence granted is further extended one month

First Lieut Charles E B Flagg Asst Surgeon is granted leave of absence for one month with permission to apply for an extension of twenty days

Lieut Col Charles R Greenleaf, Deputy Surgeon General is relieved from duty in the office of the Surgeon General of the Army and will repair to San Francisco Cal and assume charge of the medical supply depot in that city relieving Lieut Col Joseph P Wright Deputy Surgeon General, who upon being thus relieved will repair to St Louis Mo and assume charge of the medical supply depot in that city

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The Journal of the
American Medical Association

Vol XXI CHICAGO, DECEMBER 2, 1893 No 23

ADDRESS

SOME RECENT ADVANCES IN PEDIATRICS

CHAIRMAN'S ADDRESS

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY C G JENNINGS, M D

DETROIT MICH

In greeting you at the annual re assemblage of the Section on Diseases of Children, it is my first duty to express to you my sincere thanks for the high honor that the Section has conferred upon me The special study of the diseases of children is in the developmental period I think it a great honor to hold so prominent a position in the vanguard

I entered upon the duties of this office with a full realization of the responsibility which must rest upon one who attempts to guide the early and often tottering footsteps of the childhood period of a great organization, and I sincerely hope that my efforts have been, and will be, for the highest good of the Section

The recent changes made in the organization of the American Medical Association, giving to the sections and to the scientific work their proper position as the leading factors in the organization, impose upon the members of the Section the responsibility of conducting its affairs in a manner becoming the dignity in the Association to which it has been elevated, and befitting the importance to the profession of its deliberations and discussions

The distinguished men who have conducted the affairs of the Section in the past, have encountered the difficulties that attend the development of an imperfectly differentiated section While the attendance upon the meetings has often been large, and the character of the work done of a high order, the Section has lacked cohesion and cooperation With a diffuse and unstable membership, it has not exerted in the Association the influence it should, nor have its utterances been promptly and fully set before the profession

A glance at the program of this meeting shows that the subjects for discussion cover a wide range in general medicine and surgery While the other specialties deal only with the diseases of certain organs and correlated groups of organs, pediatrics, with a few exceptions, covers the whole field of the medical and surgical specialties It legitimately includes all manifestations of disease in early life, and the physician who aspires successfully to cope with the diseases of children must be well qualified in all departments of medicine and surgery I predict that the specialist in diseases of children is destined to become the highest type of the general practitioner He is the old family doctor, rehabilitated and thoroughly equipped with all the resources of modern medicine

Including in its membership, as it does, physicians from all parts of this country, from cities and rural districts, men who, with but few exceptions, are general practitioners of medicine, this Section is most favorably organized to carry out, as the national representative of pediatrics, its proper function of collecting and disseminating the most advanced teaching in this department of medicine

The metropolitan specialist will here meet, and will be benefited by the observations of the rural practitioner, and he can give in return the exact knowledge that his unique experience has brought him

To make more efficient the work and to firmly establish the Section's autonomy, your Chairman believes that it is necessary,

1 To cultivate a more intimate social relation among members The custom adopted by some of the sections to hold an annual social reunion is to be commended, and I sincerely hope that at this meeting the necessary steps will be taken to make such a reunion a fixture in the proceedings of the Section I believe that only in this way can members develop the familiarity with one another that is essential to free discussion and consequently thorough scientific work

2 To promptly publish full reports of the proceedings of the Section Contributors to section work are apt to be disheartened by publication of important papers months after the reading, and disconnected from important discussions and criticisms The editor of the Journal has assured me that the proceedings of the Section will be published as prepared, and in the order presented by the Section officers Under the by-laws this work of editing the proceedings falls upon the Executive Committee All the publications of the Section should be carefully revised by this Committee, and it should use its influence in the Business Committee of the general association to have assigned to it a competent reporter to assist the Secretary Well-prepared abstracts of papers and discussions will be sought for publication by the great journals of the country, and their wide circulation will bring credit to the Section

In addition to the more extended reports of original clinical observations and laboratory experiments, your Chairman believes it would add greatly to the value and interest of the proceedings for the officers of the Section to arrange for short, practical papers and full discussions on subjects that, while not necessarily new, are of absorbing interest to all practitioners of diseases of children

In the present meeting, the officers have arranged for a series of short papers upon practical subjects, to be treated by a number of writers and approaching the subjects from many sides Should they prove a success, this method may be further amplified and will certainly add greatly to the value of the meetings

The by-laws of the Association make it the duty of the Chairman in his address to review the work done in pediatrics in the preceding year It would be unprofitable and unnecessary to attempt to cover the whole field of pediatric literature, although it may be of value to the Section to briefly note some of the most recent advances, not so much to tell the members what is new, as to point out the direction that thought and investigation are tending in this department of medicine

The literature of the last year shows a decided increase in the use of the bath, in the acute diseases of infancy and childhood The general introduction of the treatment of typhoid fever by the systematic use of cold baths, has brought prominently before the profession the great value of the bath 1, to reduce temperature, 2, to promote nutrition, 3, to stimulate respiration and circulation, 4, to allay dangerous nervous symptoms

The popular prejudice against the use of this agent is rapidly disappearing, and I predict that at no distant date the physician will as often receive the suggestion of the use of the bath, as he now is offered the diagnosis of dentition, or the therapeutic advice of a vermifuge This change must be looked upon with eminent satisfaction In many of the mild febrile diseases of childhood, it gives comfort and quiet, while in the continued fevers, the examthemata, grave pulmonary, intestinal and nervous diseases, and all conditions attended by hyperpyrexia, it is a remedy on which the hard pressed physician may call with a confidence begotten of many faithful services

In many pyrexial conditions the coal-tar antipyretics serve well It will be noted that the tendency, very properly I think, is to confine their use to painful and distressing pyrexial conditions that are short and sharp in their course, and not ordinarily dangerous to life In diseases having a dangerous and lengthy course, they are used, if at all, only to dull the shock of the onset of the disease

Authorities on diseases of children recognize typhoid fever as a disease of infancy occurring, however, rather rarely and pursuing an atypical course In a paper by Dr W P Northrup, read before the American Pediatric Society, 2,000 autopsies are recorded covering a service in the New York Infant Asylum of ten years Dr Northrup, in that remarkable experience never met the characteristic anatomic change of typhoid O'Dwyer with a service of twenty years, in the same institution has had the same experience In the discussion that followed Dr Northrup's paper, other New York physicians related the same experience Drs Earle and Christopher of Chicago, Blackadder of Montreal, Rotch of Boston, and Adams of Washington had seen cases of typhoid in infants under two years of age

In about two hundred of the autopsies made by Dr Northrup, swollen spleens, Peyer's and mesenteric glands were found These children died of pneumonia, convulsions and various intestinal diseases, in fact, no relation between the clinical phenomena and the pathologic findings could be made out Dr Northrup concludes that such anatomic changes are not indicative of typhoid in infancy, and his experience casts a doubt on the existence of typhoid in infants under the age of one year It certainly shows the disease to be one of remarkable rarity Observations in the future by the members of this Section may aid to settle this important question

The great activity manifested in the investigations of infant feeding, shows that many of the perplexing and important problems connected with this subject are still unsettled The modification of cow's milk, to more nearly approximate the chemic composition and digestibility of human milk, seems to be the most important question writers have discussed The composition of the various proprietary infants' foods is now well known to the profession, and their adaptability to certain cases is well understood So long as their composition is kept uniform, they are useful aids to the physician

Sterilization of milk is on trial at the present time Sterilized milk received the enthusiastic approval of the profession and laity Extensive clinical experience has shown that, as prepared in the domestic laboratory, it is far from being a perfect infant food Sterilized at the usual temperature of 212 degrees, milk undergoes changes that probably lessen its digestibility, and certainly, unpleasantly modify its taste Prof Leeds has shown that a a temperature of 167 degrees F, no coagulation milk proteids takes place, and Dr Rotch in a valuable article on the "Value of Milk Laboratories" has demonstrated that at this temperature milk retains its uncooked taste, and will remain free from developed bacteria for thirty to thirty-six hours In ordinary infant feeding such sterilization of milk or more properly Pasteurization, is all that is necessary

In this article, Dr Rotch has detailed the appurtenances and methods of a perfect milk laboratory that is in operation in Boston, where is dispensed on physicians' prescriptions, milk containing any percentage of fats, proteids, carbo hydrates and water that the prescription calls for The milk, from the time it leaves the cow until it reaches the consumer, is handled with all the care that modern bacteriology suggests Every physician who has to prescribe milk for infants has felt the demand of such a laboratory and the earnest thanks of the profession is due Dr Rotch for successfully putting into experimental operation such a work

The recent combined clinical and bacteriologic investigations into the etiology of diphtheria, have been attended by the brilliant result of definitely separating this disease from its various clinical imitators

Expert clinicians have long recognized the fact that the pseudo-membranous diseases of the throat and respiratory tract vary greatly in their nature and malignancy, and many attempts were made to classify them and formulate clinical rules for their differential diagnosis Disasters so often showed the imperfection of clinical rules of diagnosis, that conscientious physicians were often driven to the necessity of considering all pseudo-membranous throats to be diphtheria and to act accordingly

As the result of brilliant labors in the same line that have given to science the exact pathology of anthrax, tuberculosis, erysipelas and other specific diseases, bacteriology has come forward, has solved the problem of etiology and offers a positive method of differential diagnosis After a somewhat prolonged period of scientific doubt, the Klebs Loffler bacillus is now almost unanimously recognized to be the sole originating cause of true diphtheria The seudo-membranous anginas are now classified ccording to the presence or the absence of the offler bacillus into true diphtheria, or, simply, iphtheria, and pseudo diphtheria

The investigations of Loffler, Roux and Yersin, artin, Brieger and Frankel, Klein, Welch and bbott, Prudden, Park and others have demonstrated at, arrested upon a denuded or susceptible mucous mbrane favorable to its development and propa-ion, the Loffler bacillus grows and produces a ocal inflammation usually attended by the forma-on of pseudo-membrane The bacillus is not, ept in very rare instances, absorbed into the aph or blood circulation, it does not invade ernal organs, nor does it penetrate in its growth underlying tissues It remains localized upon surface of the infected mucous membrane The cillus is not in itself toxic In its growth, how-er, it elaborates a body, considered from its prop-ies to be of the nature of a ferment This fer-nt is absorbed from the seat of the diphtheritic flammation by the circulation, and in contact with certain proteids digests or decomposes them with he formation of albumoses and an organic acid These products of proteid decomposition, the albumoses and the organic acid, are the toxic agents, and it is they that cause the characteristic symptoms of diphtheria unfortunately so familiar to us all The terrible toxicity of these bodies is shown by the experiments of Brieger and Frankel, who found that 0004 gram was enough to kill two rabbits each weighing three kilograms

Pseudo-Diphtheria —The familiar investigations of Prudden in 1888 upon twenty-four cases of pseudo-membranous angina, and his failure to demonstrate the Loffler bacillus threw a doubt in this country upon the etiologic relation of that organism to diphtheria His own, and other subsequent observations, have shown that the cases he studied were cases of pseudo diphtheria, and the study of various observers has cleared up, in the last year, much of he confusion that has existed in the profession conrning these clever imitations of diphtheria

Without going into detail, it may briefly stated hat the pseudo diphtherias are pseudo membranous anginas that are caused by the growth and development upon the diseased membranes of various forms of cocci, chiefly the streptococcus Unlike the Loffler bacillus, the streptococcus may extend its growth into the tissues underlying the infected mucous membranes, may be absorbed into the lymph and blood channels, and may infect deeply seated organs

To show the diagnostic and prognostic relations of the two forms of pseudo membranous inflammations, I will briefly give the results of the bacteriologic study of a large number of cases by several observers In 154 cases, clinically diagnosticated diphtheria, Baginsky found the Loffler bacillus in 118 and streptococci and staphylococci in 36 The mortality in the Loffler, or true diphtheria cases was $38\frac{1}{5}$ per cent In the uncomplicated coccus-diphtheria no per cent Martin, in 200 cases of supposed diphtheria found the Loffler bacillus in 128 and cocci in 72, twenty-nine of the cases of coccus-diphtheria were croupous Without giving figures he stated that the mortality in the true diphtheria was much greater than in pseudo diphtheria Koplik, in thirty cases found seventeen in which no Loffler bacilli were present Park records, in two series, 244 cases in which the clinical diagnosis of probable diphtheria was made. In 127 cases, Loffler bacilli were found and in 117, streptococci and other cocci The mortality in the true diphtherias was in the first series of 140 cases. 46 5 per cent , in the pseudo diphtherias, $5\frac{4}{7}$ per cent In the second series of 104 cases, the true diphtheria showed a mortality of 26 per cent , the pseudo-diphtherias, one death in 31 cases

The detailed reports of these observers show that many cases of pseudo diphtheria and true diphtheria could not be differentiated clinically one from the other Not until a bacteriologic examination was made, was a correct diagnosis possible The laboratory observations, therefore, scientifically demonstrated what many of our ablest clinicians have long held viz , that the varying clinical histories show that there are at least two types of pseudo-membranous inflammation, one intensely malignant, the other, or others, very benign, and that the clinical phenomena presented by these are often so similar that the most expert diagnostician is baffled in his attempt to differentiate them This is the position I have held in the discussion of croup and diphtheria for the last ten years

The study of the pseudo-diphtherias is of great interest, and I will quote from Dr Parks his classification of them, and his observations on differential diagnosis

"1 *Pseudo-Membranous Angina* —In the typical cases a thin, friable, grayish pseudo-membrane covers the margins of the uvula, faucial pillars, and sides of pharynx, the tonsils frequently having thicker exudates In the less marked cases only the uvula or faucial pillars, with or without the tonsils, are affected In these the local and constitutional symptoms differ greatly, when uncomplicated with other infectious diseases they seem to regularly recover, unless the larynx is involved

"2 *Pseudo-Membranous Laryngitis* —In these cases the larynx and bronchi are chiefly affected They may die from suffocation, or from the complicating bronchitis and broncho-pneumonia

"3 *Croupous Tonsillitis* —In these the tonsils are more or less completely covered by patches of exudate or pseudo-membrane The local and constitutional symptoms are frequently marked in the first few days They regularly recover

"4 *Follicular Tonsillitis*

"5 *Acute Pharyngitis and Tonsillitis without exudate*

"6 *Cases similar to all the foregoing, but complicating infectious diseases* —These have a considerable mortality

"For prognosis, the points to be mainly considered were the age, the location of the membrane, the condition of the bronchi and lungs, the temperature and the relation to other infectious diseases

DIFFERENTIAL DIAGNOSIS

"From the point of view of diagnosis, it is important to fully understand that there are many of the less characteristic cases of diphtheria, which are so similar in symptoms and appearances to cases of pseudo-diphtheria that they can not be separated from them except by bacterial cultures Among the cases examined I have found that

"No case of follicular tonsillitis in an adult was true diphtheria No case presenting a typical appearance of well-marked cases, such as those described as pseudo-membranous angina under pseudo-diphtheria, was true diphtheria

"Most cases of pseudo-membranes and exudates, confined to the tonsils in adults were not diphtheria, but a few cases looking just like them were Most cases of acute inflammation of the pharynx and fauces, with very little or no exudate or pseudo-membrane, were not diphtheria, but a very few were, and in all of these there was a direct history of infection The majority of uncomplicated cases of pseudo-membranous laryngitis were true diphtheria, but a few in the summer and fall, and quite a number in the late winter and spring were not true diphtheria In most, a clinical differential diagnosis was impossible without cultures In young children, cases of diphtheria with exudate confined to or extending beyond the crypts, and those with little or considerable pseudo membrane were at times true diphtheria and at times not The two classes of cases *often presented similar appearances* True pseudo-membranes confined to the nose were, in all uncomplicated cases, true diphtheria

"In the milder cases of pseudo membranous inflammations, one condition was frequently observed, which was an almost certain sign of true diphtheria This was the presence of irregularly placed patches of adherent pseudo-membrane on some other portions than the tonsils or margins of the faucial pillars or uvula The amount of membrane usually differed on the two sides The thick gray pseudo-membranes which cover a large portion of the tonsils, the soft palate, and often nostrils, and naso-pharynx were always the lesion of true diphtheria"

Upon the line of these observations we must now deal with pseudo-membranous inflammations They are pregnant with wisdom that is of inestimable value in diagnosis, prognosis, preventive and curative treatment

Dr Park details the technique of his culture methods for diagnosis, and the writer is making a test of these from the standpoint of the private practitioner The results are not as yet perfectly *satisfactory The position of the question and the* value of bacteriologic diagnosis at present is best summed up by Koplik in his article He says

"Clinically it is impossible, from simple inspection, to sift the cases of non characteristic true diphtheria from other forms of non diphtheritic angina"

In the bacteriologic examination of these cases, and with the subsequent animal tests, lies the only true diagnosis Is it possible for us at present, in private practice, to examine each case as has been done in the foregoing studies? The author is not so sanguine upon this last point as Baginsky of Berlin, in his last article upon diphtheria It is possible in the clinic and hospital to do such work, for the facilities are readily at hand, as also the conditions for study In private practice, however, for the present we must insist upon the proper isolation of all doubtful cases of throat disease, and the time is right for pushing the doctrine of isolation to its farthest limits

Gentlemen, I now announce the Section on Diseases of Children to be open and ready to proceed with the business before it

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ORIGINAL ARTICLES

RETURN OF VOICE AFTER LARYNGECTOMY

ALTHOUGH THE LUNGS AND TRACHEA ARE ENTIRELY CUT OFF FROM COMMUNICATION WITH THE THROAT AND MOUTH

A Clinical Lecture on the Physiopathology of Voice Illustrated Delivered at Jefferson College Hospital, Philadelphia, Oct 20, 1893

BY J SOLIS-COHEN, M D

PROFESSOR OF LARYNGOLOGY IN THE JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA ETC

I have to show you, gentlemen, a unique case, one of the most remarkable surgical triumphs of the century, and I doubt whether another just like it exists anywhere else at the present time Nineteen months ago, in the presence of the class, I removed from this man the larynx and the first ring of the trachea, on account of malignant growth (adeno-*sarcoma) protruding externally The epiglottis* was not removed, as it was not involved in the disease In order to prevent the fluids of the mouth from afterwards descending into the trachea, and the production of septic pneumonia (shluck-pneumonia) with its fatal consequences, (which occurs in a great many cases of this kind after operation) the second ring of the trachea was stitched to the skin in the neck, the first ring having been removed with the larynx The tracheal orifice can be seen, here, in the middle line of the patient's neck, just above the top of the sternum, and you can readily discern the upper cartilaginous rings and the membranous posterior wall Since the time of the operation, there has been absolutely no connection between this man's lungs and his mouth As you observe, he does not wear any tracheotomy-tube, for the trachea is permanently open, and he breathes without difficulty He has had no pain, no dyspnea, and no dysphagia since the operation, and for more than a year he has had no aphonia There has not been any return of the disease, and he is apparently in good health

I did not bring him before you in order to speak *of the operation, however, but rather to discuss* the physiology of the voice, using the case as an illustration of an entirely unexpected result It demonstrates the apparent paradox that, in order to speak, a man does not need a larynx This man can talk distinctly, although with a husky voice, somewhat like that of a man with a sore throat, but loud enough to be heard at a distance of more than thirty feet

I ask him, "What's your name?" and he replies, "Daniel Hickey, sir," in a tone loud enough to be heard clear across the room

Again, "How old are you?" and "Forty-seven, sir," you hear him reply, quite distinctly His voice is as good as is heard in many a case of chronic laryngitis Now I will ask him to sing for you (The patient essays a verse of "Come back to Erin," in a low voice, but evidently carrying the tune) and you notice that he even has the power, to some extent, of controlling the pitch of his voice, so as to turn a tune

Let us now consider the mechanism by which this man phonates To comprehend this will require also a brief consideration of the mechanism of voice under ordinary, or physiologic conditions You have noticed how this patient uses his mouth and throat in articulating In order to produce a sound, it is necessary to have vibration of something which moves very rapidly Ordinarily, the vocal bands do this, under the impulse of the air expelled from the lungs In this patient it is quite different By gulping air, he distends the skin of his neck into a sac, thus forming an air-cavity, which acts as a supplemental lung as it were But something more than this air is needed There must be some band of tissue, which can be held rigid, so that it can be made to vibrate by the currents of the air, which are forced past it He first takes a deep inspiration to fix the clavicles and the muscles of his neck Then he takes a gulp of air into a sac of integument just above the orifice of his trachea, which air he then expels in his efforts at articulation, and the accompanying vibration of the band of tissue referred to supplies the place of the lost vocal bands With one inspiration he can count audibly up to five There are occasions when his voice is better than at others, but we may state that he finds it quite sufficient for the ordinary purposes of life

After extirpation of the larynx, in cases similar to this where the larynx has been removed for malignant disease, it has generally been essential that an artificial appliance, or mechanical larynx, be inserted in order that the patient may talk This artificial larynx is a chimneyed tracheal canula into the external portions of which is inserted a reed or tongue of metal which vibrates, when the patient speaks, but the pseudo voice is monotonous and unnatural Such an instrument would not permit a change of pitch, such as we have just heard in the present patient The voice is like that of a puppet It is a squeaking voice, something like that used by a Punch and Judy exhibitor

Upon looking in this man's throat with a laryngoscope mirror this is what I see the tissues are in a healthy condition There is a cicatrix running from the base of the epiglottis, downward in the middle line, but a little obliquely from left to right, which is the obverse portion of the cicatrix you see in his neck Below the epiglottis, the pharynx forms a cavity, of a funnel shape, leading into the esophagus, the opening of which is recognized by a horizontal line To the left side of this opening, I observe a band of tissue, reaching upwards and backwards towards the wall of the funnel-shaped cavity, and which is covered by mucous membrane, and this I take to be the band which vibrates This band, I believe to be a portion of the horizontal fibers of the inferior constrictor muscle of the larynx, which the man has utilized, by training, so as to form a new vocal apparatus Having all the necessary organs of articulate speech, the nasal chambers, pharynx, tongue, teeth, and lips, he only needed a vibrating reed in order to speak again as before the disease of the larynx destroyed his voice This is an exemplification of one of the pre Darwinian theories of evolution, the doctrine of Lamarck that in the process of development of organs, function precedes structure Here, in response to the demand for a voice, there is a utilization of structures which normally subserve purposes quite different

I will now review briefly the subject of the physiology of voice voice is a sound produced by the vibration in the larynx of two approximated membranous bands, the vocal bands, which stretch from the thyroid cartilage in front, to the arytenoid cartilages behind, with a linear space between their edges through which the air passes from the lungs Our studies in acoustics teach that sound is a vibration conveyed to perceptive ears

To produce the sound, the vibration and the hearing power are both requisite There are sounds which are composed of vibrations so rapid that they are inaudible to human ears, in fact, it is believed that many of the vibrations produced by insects are inaudible to human ears because the human membrana tympani is unable to vibrate in consonance with them The ability of different human beings to appreciate rapid vibrations differ You may have noticed when walking in the country on a summer's day with some friends, that some insect-sounds were heard by some and were not audible to others, to some there would be sound, to others, no sound This is proof therefore, that sound requires both a commotion in the air to produce it, and a perceptive faculty in the ear to appreciate it The next point to bear in mind is that this commotion is in the form of waves, of alternate condensation and rarefaction, which proceed in all directions from the place of origin, in other words, these waves are spherical, not circular, and not on a plane Now, when anything moves as rapidly as sixteen times in a second, the ordinary human ear will begin to hear a rumbling sound which when the motion is made more rapid, will increase proportionately in pitch The lowest musical tone, appreciated as such by the human ear, is that given by an organ pipe thirty-two feet long, which vibrates sixteen times in a second and is tuned to the C″ of sixteen and one half vibrations per second Sonorous vibrations may be increased in rapidity until they reach a point, or pitch, which the human membrana tympani can not vibrate in unison with, and consequently can not appreciate, and silence ensues

Sound has three physical qualities intensity, pitch, and quality, or character of tone Intensity is simply loudness of sound It depends on the size of the vibrations or sound waves set up in the atmosphere The larger the volume of air set in commotion, the more intense the sound A piano wire will produce a note in intensity proportionate to the width of its excursion, which in its turn is proportionate to its length A human larynx of large size and with long vocal bands will afford more volume of intensity of sound than a small one, both being used with equal skill Pitch is independent of intensity and quality Pitch indicates the position which a note holds in the musical scale It is due to the rapidity of the vibrations The more rapid the vibrations, the higher the pitch, the shorter the vibrating medium, the more rapid the vibrations and the higher the pitch Thus, if while a violin string is vibrating, you shorten it, by placing a finger upon it, you raise the pitch, and the vibrations are more rapid Quality of tone-character, or *timbre*, as the French call it, is the characteristic peculiarity, which enables you to distinguish one instrument from another, and by which you distinguish one voice from another By its aid you can, if your ear is good, recognize and follow any single instrument during an orchestral performance It depends upon the shape of the vibrations And right here, let me now call your attention to another point, which may be a little difficult to comprehend, but whose importance will be manifest in a few moments No sound is a simple sound When you set a piano string in motion, and it is vibrating as a whole, if you touch it in the middle it will vibrate in halves while it continues to vibrate as a whole, each half vibrating separately and you will hear the octave of the tone mingle with the main tone. In a similar way you can divide it, so that it will vibrate in thirds or fourths and so on, and each aliquot part lends its own tone to the clang. In point of fact, these shorter waves, or vibrations occur also during the vibration of the string as a whole when it is let alone, producing what are called over-tones and under-tones, all vibrating in harmonious accord. Each tone is an orchestral combination in miniature. This is what produces the quality of the sound which is due to the ultimate or composite shape impressed upon the sound waves by the fundamental tone and its upper tones, its combination tones and so on. Nothing proves this so well as the phonograph, which preserves the combined qualities of the different tones, whether of the human voice or of an instrumental accompaniment, or of both, so that the resultant effect may be reproduced and be recognized by the ear. This is because the record in the phonograph is the combined result of all the factors of the sounds, and when given back to the air it reproduces that combined result in the simplest expression. Quality of sound, therefore, is due to the shape of the vibrations, and the shape of the vibrations is due to the supplemental factors producing the over-tones and the under-tones, as well as the fundamental or ground tone. There are some simple physical experiments by which fundamental tones may be tested and eliminated from the clang. For instance, if you strike the body of a violin, you will find that it will give a sound of a certain pitch. Now, if you will strike the proper string in the violin so that gives a note of the same pitch, you will find that that tone will be reinforced by the vibration of the body of the violin more than any other tone. In a similar way, you may strike a note upon a piano which will produce the same tone and the violin will vibrate in unison with it.

For the production of voice, you not only require a simple mechanism for the production of sound, but you also require a resonator, which will act like the sounding board of a piano or the body of the violin. The shape of the vibrations is a physical thing altogether. It depends upon the things which vibrate and the amplitude of the movement. The combination of all these vibrations in a given tone, determines the quality of the tone. In the human voice, we find a resounder in the vault of the pharynx and the nasal chambers. The palate, also the tongue, the teeth and the lips, even the top of the head, may be noticed to vibrate while singing certain notes, or the head, the chest, the trunk and even the body, as a whole, may be felt vibrating. By utilizing the sensations produced in these various resonators, singers obtain the most beautiful effects. I have seen cases of cut throat in which the vocal bands were exposed and the resonator tones were absent by reason of the injury to the continuity of the resonant apparatus, and have noticed that the voice coming directly from the larynx through the opening in the neck is exactly like that of a puppet, because of the absence of the familiar resonance, which gives the natural quality to the human voice. Change the shape of the resonator in the human instrument or in the manufactured one and you have a change in quality. This is the way disease alters the quality of the voice. We may make a simple experiment to show the effect of a change in the shape of the mouth upon the voice. When you open your mouth to the fullest extent and utter a sound, the only sound you can make will be the vowel "ah," (as in father), by closing the mouth a little, and emitting the same sound from the larynx, it will change to "e," (like the a in hate), and as you still farther progressively close the mouth you will get "i", (like e in meet), "o" and "u." These different vocal sounds are due to nothing else than to changes in the shape of the resonator. Certain tones are reinforced in the one instance and other tones in the other instances.

Some twenty years ago, I exhibited to the class at this College and also to the medical class of the University of Pennsylvania, an instrument known as Faber's Talking Machine. In that instrument, the vocal sounds were made by thin plates of ivory, set in vibration by currents of air from a bellows, it showed especially the effects of changing the shape of the resonator by valves, which changed the quality of the tones. This peculiarity of vocal resonance will serve to explain the difficulty which adult foreigners experience in overcoming accent, and by which their *nativity is revealed*. *For a period of* twenty years or more, their vocal organs will have been accustomed to produce the various sounds in their own language, and after the accessory vocal organs have been developed in accordance with such demands, they can not readily accommodate these structures to produce new combinations of sounds. Children learn foreign languages without accent, because their vocal organs are more flexile, but when their original language is retained as the family intercourse, they always retain some of its accents. Thus in England, some years ago, I heard the Prince of Wales speak a number of times and noted with surprise that he had a decided German accent. This is simply because his parents had made German the language of the family. A remarkable peculiarity of the voice is its adaptability to extremes of pitch and intensity, the production of which in musical instruments the work of men's hands requires a large series of factors of different sizes. Remember that to produce the human voice we have only the two vocal bands, at best only an inch in length, a little longer in the male than in the female. They are less than a fourth of an inch in width, and it is only one free edge of each band which is free to vibrate. The wonder is how such a little structure as this is, can produce such a variety of sounds. From two and one-half to three octaves is the ordinary compass of the voice, the combined range of the male and female voices is about five octaves. Exceptional voices may transcend these limits. Thus Mr. Fisher could sing down to F^1 (forty-three and one-half vibrations) while La Bastardella could sing C^6 (2,100 vibrations). The changes in pitch are even more remarkable. Madame Mara with a compass of three octaves, made 2,100 changes of pitch, or 100 between each two notes of the 21 in her compass. Ordinary good vocalists make 150 changes, or 10 for each tone in a compass of 2 octaves or a little beyond. The change of length in the vocal cords to produce these changes of pitch, will not vary more than $\frac{1}{1500}$ of an inch. In Madame Mara, they were not over the $\frac{1}{17000}$ of an inch.

Now, we will proceed to the consideration of how these changes are produced.

The changes of length of the vocal bands are caused by the contraction of the crico-thyroid muscles, and the posterior crico arytenoids on the one hand, and by the thyro-arytenoids on the other. The vocal bands are attached to the thyroid cartilage and to the crico thyroid membrane with which they are continuous, at the anterior, lower portion of the thyroid cartilage. Now when the crico-thyroid muscle contracts, it draws upon the cricoid cartilage and pulls it upward and forward, towards the anterior portion of the thyroid cartilage, as you can test on yourselves by placing a finger lightly on your cricoid cartilage while uttering a sound in a high pitch. This puts the vocal cords upon the stretch lengthwise. This is, however, only a part of the mechanism. If a person sings the scale, while you are examining the larynx with a mirror held in the mouth, you will notice that the vibrating portion of the cord, is progressively shortened, front and back, as the voice ascends the musical scale. This is done by the internal thyro arytenoid muscles most complex in their structure. How delicate the mechanism to produce this! It must be done by tension and by shortening. Something may also be due to impact from the expiratory current of air, but not a great deal. You can easily understand that very little difference in the symmetric vibration of the vocal bands would produce a very distinct effect, both bands must vibrate synchronously to make a perfect voice, for the difference between harmony and discord is not very great, where they meet, though different indeed at their extremes. Discordant sounds may be made musical by regulating their pitch, and thus we have the xylophones, glass harmonicas and the like. I remember reading in Radau's "Acoustics," many years ago, a description of a sort of musical instrument used in Brussels during a celebration of the Virgin in 1549. It was composed of twenty cats with voices of different pitch. Each cat was in a box over the edge of which its tail was confined. This cat organ was played upon by a bear, who had been taught how to pull the tails of the cats whose mews thus produced notes or tones, with more or less musical effect. Such an instrument was also constructed by the court jester to amuse the Emperor Sigismund, in order to rouse his depression of spirits. It was sagely remarked by the historian that "the cats were not happy at this epoch." Somewhat like a modern comic opera declares of the life of a policeman. I mention this in order to show that noises of different pitch may be turned into musical effects by adjustment of pitch, just as music can be turned into noise by reversing the process and producing discord. The notes of the gamut are pleasant, struck in succession. Strike them together and you have discord indeed.

Now to apply this to pathologic conditions of the larynx. If we have a congestion of the larynx and more especially if one vocal band only is congested, the voice will be altered in quality. If both bands be congested equally, the alteration of voice may not be so marked as when only one is affected. A uniform congestion of the larynx lowers the tones, so that a baritone may sing more readily when he has a congested larynx than in his normal state. Drinking beer produces temporary congestion, and baritones sometimes resort to this expedient, before singing, in order to lower their register. They do not know why it does so, but they have learned the fact from experience. Many a baritone owes his deepest tones to the glass or two of beer, which he drinks just before singing. His vocal bands become congested and thus heavier. They can be made to vibrate more slowly and thus lower the pitch of the tone.

You may have a little tumor on the vocal band, and if it develop at one of the nodal points, so as to divide the band into two aliquot parts, whether halves or thirds or fifths, there may be no interference with the singing voice, and a singer may use his voice without suspecting that he has such a growth. These little tumors upon the border of the cords are generally symmetrical, and are produced in this way. The patient sings during an attack of congestion. The friction of the cords in vibrating rubs off the epithelium, and this is followed by proliferative inflammation, resulting finally in a cicatrix and the formation of fibrous nodules. Should the growth be at another place than at one of the nodal points, the voice will be more or less altered, just as in congestion the voice will be more affected when the growth is limited to one side. A small growth may injure the voice for a long time, and if it acquires a thin pedicle it may drop below the glottis and thus improve the voice while the tumor is growing.

There is another very peculiar thing in connection with the production of voice and sound. When listening to music a certain note may thrill you. The physical cause is synchronous vibration of your body which responds to the pitch of the tone. If you take a guitar and so tune it that will vibrate at a a certain pitch, and then take another instrument, and strike a note of the same pitch near it, the first instrument will vibrate in unison, just as the globe in the gas fixture will vibrate sometimes, at certain tones of your voice. Strike the globe and you will find its pitch the same as that of the tune that started it. In the same way heavy bells may be set ringing by playing an instrument properly attuned beneath them, or a suspension bridge may be thrown in vibration, by fiddling continuously upon one string of the same pitch. A company of soldiers in marching across such a bridge are not permitted to keep step, for fear that the vibration may become so great as to destroy the structure. The starting of a big bell is alluded to by George Eliot at the beginning of one of the chapters of her "Middlemarch," a novel in which by the way you will find an excellent description of a cultured physician:

> "How will you know the pitch of that great bell,
> Too large for you to strike? Let but a flute
> Play 'neath the fine mixed metal. Listen close,
> Till the right note flows forth, a silvery rill.
> Then shall the huge bell tremble—then the mass,
> With myriad waves concurrent, shall resound
> In low soft unison!"

Similarly you can reproduce your voice or your whistle in a piano. Raise the lid place your foot upon the pedal, so as to keep the hammers from the strings, then pronounce the vowels, or whistle over the strings, and your voice or your whistle will be almost exactly reproduced. Not fully because the piano is what is termed a "tempered" instrument. The scales between the octaves are not exact and the tones therefore are not exact, but only nearly so. Were they exact, many more strings would be necessary and the instrument would be too complicated to play on. This is one reason of the inferiority of the piano to the violin in the hands of a master as a means of expression It is on the same principle that the phonograph is able to repeat the various sounds which are recorded by it

There is still another attribute of certain voices, which I call 'reach" By this term I mean that *quality by which the* voice is carried to a distance—the penetrating power, it might be called It is not unlike the power which a ball-player has of throwing a ball to a distance The voice need not be loud in order to possess this quality, by which it is made very distinct and readily heard, Public speakers and singers often possess this to a remarkable degree I have heard the whisper of a good actor clear across the theater When Madame Parepa-Rosa sang at the grand concert in Boston at the great Jubilee some years ago, there was a chorus of 1,200 voices and an orchestra of 1,000 instruments, and yet the tones of her voice were so pure that they could be clearly distinguished among them all, and this in audiences of more than 40,000 persons

A few words now as to the musical qualities of the human voice, for you may be consulted in reference to them For practical purposes we distinguish four different varieties of the singing voice

In the female voice we have soprano and contralto, and in the male voice the tenor and bass The baritone is a tenor voice which can not sing very high, corresponding with the mezzo-soprano in the female voice

It will not be necessary to define the terms soprano, alto, tenor and bass We are concerned particularly with what causes these different qualities of voice It depends partly on pitch and greatly upon quality In the first place, it is not due entirely to the size of the larynx A tall man with a large larynx does not necessarily have a bass voice I believe that these different voices are due to the resonating bodies in the neighborhood The natural difference between the male and the female voice is only an evidence of differences in the physical construction of surrounding organs In man, the respiration is mainly by the diaphragm, in woman, the breathing is costal, in man, the abdomen moves more in respiration, in woman, the upper portion of the chest The upper air passages are also different in men and women The larynx is more acutely angular in front in the male, and the rings of his trachea are more semicircular and its membranous portion wider in proportion

There is one other point which I wish you to bear in mind It is of immense importance in practice, especially *among singers I have here upon the black*-board a representation of the vocal bands The thyroid cartilage is incorrectly said to be composed of two pieces, it has three two lateral wings and one small central portion It is to the middle section that the vocal bands are attached Examining the structure of the vocal band, we find that the posterior vocal process passes to some distance into the vocal band These processes may be pressed together and thus shorten the bands by reducing the vibrating portion It is thus that the head tones are formed Of course, when the vocal processes are forced together, only the portion of the band anterior vibrates, and the pitch is necessarily heightened Therefore if you will examine a man's larynx while he is singing, you can tell whether he will be able to sing the head tones or not There is no use in a man's trying to sing head notes, if he has not well developed vocal processes, for the mechanical requirements are absent These are well developed in the female and females readily produce head tones The physical laws which preside over the formation of voice are precisely the same as those presiding over sound of any other kind

In public speaking or singing, very much depends upon the manner of respiration If you speak with the abdominal walls relaxed and the diaphragm low down, a larger column of air will be at your command, so that you can produce a greater volume of sound and you can also talk longer than if the abdomen and diaphragm are rigid, and in the latter case you are apt to pitch the voice too high and you will strain the voice, because the larynx is more or less compressed and is not in an easy, natural position You will sometimes have patients who will speak in a high, falsetto voice, which is the voice of childhood retained in adult life Little boys and little girls have voices so much alike that they can not be distinguished As the boy approaches puberty, his voice descends an octave, but in the girl the voice only descends a note or two in the scale When the adult male voice retains its puerile quality, it forms what is called a eunuchoid voice This effect was purposely produced by castration for church purposes when female voices were not permitted in the choir, forming in fact a male soprano If a falsetto voice is due to a wrong method of using the voice, it may be *overcome* by instructing the patient to use the abdominal method of speaking, to which I have already alluded You may be occasionally consulted with regard to the propriety of allowing little children to take lessons in singing Of course, it is important that proper methods be taught, and if this be done, I see no reason why children of 8 to 10 years should not be taught to sing, if under good teachers When a boy approaches the age of puberty, however, no extra work should be put upon the vocal organs until the voice has changed He should then be taught by a male teacher, for the reason that the pupil will imitate the teacher For the same reason girls should be taught by women The best mal teachers while they give instruction in correc method, have female assistants to train their female pupils

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THE CLASS OF CASES IN WHICH WE MAY EXPECT GOOD RESULTS FROM EXCISION OF THE MEMBRANA TYMPANI AND OSSICLES

Read in the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association

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The history of the excision of the membrana tympani and ossicles has been brought to the notice of the profession so frequently, that a repetition of these familiar facts would prove tiresome and uninteresting We should, however, mention the fact that Kessel in 1875, Lueke in 1880, and Schwartze before 1885 performed this operation for the relief of *deafness*, while great credit is due to Sexton, who in 1886, by his courage and skill brought before the American medical world the results of his numerous operations for the cure of *chronic aural discharges*, and later for the relief of deafness It was Sexton, therefore, who first proposed this operation, and performed excision of the membrana tympani and ossicles, for the cure of discharge from the ear

Burnett and others, however, soon followed and by publishing their results, did much to establish this formerly condemned operation and bring it to the almost universal recognition of that part of the profession interested in aural surgery We are all familiar with the determined opposition this reasonable operation called forth in some quarters It did, indeed, seem peculiar that advocates of rational medicine should have offered such strong and damaging protests against a surgical procedure which they could not but acknowledge was based on *sound surgical principles,* and especially, did this opposition appear unreasonable, when we remember that these same opponents were acquainted with many unfortunate patients suffering from a chronic discharging ear with its many dangers, which had not only resisted *their* every effort, but had moreover baffled the skill of other specialists

The great danger to life arising from a suppurative disease of the middle ear is now admitted by all, and surely any procedure proposed for its relief is worthy of due and proper consideration, so long as the treatment thus suggested is not likely to produce bad results, and has for its support the same sound anatomic, pathologic and physiologic backing that has characterized all the noted advances of modern surgery

Those who have not taken kindly to this rational treatment have declared the operation to be dangerous, and therefore involving too many risks to admit of its becoming popular, to all of which we would ask whether this or any other proper surgical procedure could be more of a daily menace to life, than a chronic discharge from a cavity, the walls of which are composed of plates of bone that are extremely thin, and surrounded by such vital parts as the brain and important blood vessels?

It is certain that a continuation of the discharge favors necrosis of these delicate plates of bone, and thereby induces, through continuity of structure or by direct communication, abscess of the *mastoid,* septic inflammation of the brain substance and its coverings, or *cerebral abscess,* from which alone there are annually dying in the United States probably four thousand of her inhabitants At present it is difficult to say precisely just what class of cases are most likely to yield good results from this mode of treatment Some few cases, regardless of the duration of tinnitus and vertigo or the degree of deafness, will give very satisfactory results As a general rule, however, it is not well to expect too much improvement of hearing from a chronic, non-suppurative otitis media, and yet, in this class of cases, where tinnitus, pain and vertigo are urgent symptoms, and have resisted other methods of treatment, we should not hesitate to suggest the removal of the membrana tympani and one or more of the ossicles for their relief

It has not been our custom in the non-suppurative cases to excise the entire membrana tympani unless it is greatly thickened, opaque, and firmly adherent to the tympanic walls In this class of cases it is interesting to note the large number of patients in which the tympanic membrane presents quite a healthy appearance It is, however, in just such cases that we remove only sufficient membrane to enable us to excise the malleus, the incus, or both, In this modified operation it is very unusual to have any reaction, and we likewise avoid the pain and suppuration that has at times been reported By this partial myringectomy, regeneration of the membrane is so slow that at present we can recall at least seven cases in which the original opening has remained for more than two years, moreover, in our experience of over two hundred patients operated on, we are convinced that it is seldom necessary to remove the membrana tympani after regeneration has occurred, unless, of course, the operation had been performed in one of the suppurative cases, and where regeneration of the membrane had confined a dangerous necrosis of the tympanic cavity, or concealed a threatened mastoid involvement

In order to obtain good results in the suppurative cases, we believe it to be positively essential to remove every fragment of the membrane, as *this is* the *only* way in which we can hope to obtain free drainage, and procure an opening through which to properly treat the diseased cavity If the attic is involved it will be found necessary to excise both the malleus and incus, for these bones are very susceptible to carious degeneration, and where either is left behind the suppuration is almost sure to continue, and even if the discharge should cease, it is likely to reappear at any time in the future

In regard to the operation for excision of the stapes, which has met with such good results in the hands of Dr Jack of Boston, I can say but little, as my experience with this operation is limited to two cases Both of these however, were somewhat successful in the relief of symptoms that had otherwise resisted treatment, but as each of these cases suffered from prolonged staggering vertigo, as sequela of the operation (possibly due to my lack of skill) and as our patients have generally recovered without this procedure, we have found no indication for advising or performing this more formidable operation

In order to show the benefit that is sometimes obtained from apparently the most hopeless condition, we will review the detailed history of several unique cases, characterized by marked deafness, severe pain, and vertigo, all of which were relieved by operation

Case 1—J K , 39 years of age, ten years ago began to lose his hearing, accompanied by an itching of the external auditory canal This loss of hearing was in both ears and continued to grow worse until eighteen months ago when he was suddenly attacked with severe pain in each ear, radiating over the entire head This pain continued without interruption for nine months, then without apparent cause the pain increased in such violence as to necessitate his going to bed and summoning a physician Before relief could be obtained he became totally deaf in the left ear At the end of two weeks the pain was so much better as to enable him to leave his bed Some pain, however has continued and now seems to be confined to the right ear On Jan 10, 1893 he consulted the writer (bringing a note from the family physician, to whom I am indebted for his previous history).

It is well to state that this patient has never had any discharge from the ear, nor does he remember having had at any time an injury to his head Except for the inflammation extending along the manubrium nothing of any importance could be seen to account for his suffering The mastoid region presented a healthy appearance, the drum, however, was much retracted and firmly adherent to the promontory His hearing power was nil, through ærial conduction of sound Bone conduction was about three-fourths normal

With the hope of relieving the pain alone, we suggested the removal of the drum and ossicles On Jan 16, 1893, under ether in the hands of Dr Pontius, we removed the drum by the circular incision, and extracted the malleus and incus in a piecemeal way, their vitality having been so completely destroyed by the process of necrosis that they crushed to powder under the slight pressure of a delicate pair of forceps These bones had undergone the several changes which are more forcibly than elegantly expressed by the term "dry rot" I believe that this was the first and only case in the writer's experience where complete excision of the drum was accomplished without any hemorrhage *After operation the tympanum and canal were lightly* packed with iodoform cotton and the patient kept quietly in bed For three days the pain was in no way relieved, although the hearing power was materially improved From the third day, however, the pain and tinnitus grew less, while the hearing power continued to increase

On January 24, or eight days following the operation, the pain and tinnitus were so slight as to be barely noticeable Could hear loud conversation at three feet, tuning fork and watch were negative in result

March 12, or about two months after the operation, reports that he has been free from pain, and almost free from tinnitus for two weeks Hearing power slightly improved May 16, has not had pain since six weeks following the operation and the tinnitus is now so slight as not to annoy him Thinks it is growing less each day Can hear ordinary conversation at six and one-half feet, fork and watch, each, at four and one half inches

It is difficult to say why this man should have suffered so severely, for surely the condition as above narrated does not seem to be a sufficient explanation As regards tinnitus and loss of hearing, we consider this to be fully explained in expressing the belief that a thick drum bound down by adhesions, with ankylosis, or other disease of the ossicles, acts as a foreign body, and as such produces tinnitus and deafness, the degree of which is in direct ratio to the extent of the disease present, and consequent interference with their normal function We would, therefore, consider the removal of such disturbing foreign elements as not only sufficient reason for the partial or complete restoration of hearing, but it can also be hoped for and reasonably expected that we may secure relief from distressing tinnitus, and ofttimes dangerous vertigo

Case 2—A M, aged 16, applied for treatment-Aug 10, 1890 When seven years old had scarlet fever This was followed by discharge from both ears, which was continuous until the above date Meanwhile she was progressively and rapidly losing her hearing Suffered continuous pain, sometimes very severe, Was totally deaf in left ear After making many and various unsuccessful efforts to arrest the discharge and relieve pain, we suggested the removal of the fragment of drum and malleus This we performed on Dec 9, 1890, after which the ear was packed with iodoform cotton, and replaced by fresh cotton every one or two days

Dec 20, 1890, no discharge since operation, hears fork at five inches, watch at three inches, ordinary conversation at three feet Jan 26, 1891, tympanum entirely dry, hears fork at five inches, watch at six inches, ordinary conversation at five feet April, 1891, no discharge since operation Hears watch at six inches, fork at seven inches, and ordinary conversation at twelve feet December, 1891, slight improvement over the above July, 1892, hears watch at 10 30, fork at twelve inches, ordinary conversation at fourteen feet

May 24 1893 or two and a half years after operation watch 16 30, fork seventeen inches, ordinary conversation, twenty-seven feet No discharge since date of operation Health much improved, performs the duties of life quite as well as if she had never been deaf, or suffered from pain in that ear

Case 3—H D 62 years old, applied March 10, 1893 Six years ago resided in England, at which time was taken with a severe pain in the right ear which she thinks came from cold Never had any ear trouble before, and has always enjoyed good health Was treated by physicians in England for three years, but received no benefit Has been in this country for three years and undergone treatment in the hands of many physicians, and as a private patient at several hospitals, without beneficial results

On March 10 last, or three months ago, she consulted the writer at the Jefferson Hospital, suffering extreme pain and greatly annoying tinnitus Never had discharge from the ear, but has suffered from severe headache since early adult life

The drum and external auditory canal on examination revealed nothing abnormal, except some inflammation covering the manubrium The Eustachian tube was somewhat swollen, but inflation of the tympanum by Politzer's method was easily accomplished This interference, however, gave *her some increase of pain By aerial conduction of sound* she could hear only very loud conversation Watch and tuning-fork could not be heard Bone conduction, however, was quite normal Aside from operative interference it was difficult to suggest or carry out a line of treatment with any reasonable prospect of securing relief, and inasmuch as she had undergone much treatment of the usual routine kind without in any way being benefited, we felt justified in suggesting excision of the drum and malleus, which was performed on March 30, 1893

For one week following operation she continued to suffer some pain, but it was markedly less severe On the tenth day a slight discharge of pus was noticed, at which time the pain entirely ceased The discharge became quite copious three days later Sixteen days after operation the discharge was quite scanty and the pain returned A free discharge, however, was reestablished and the pain again ceased not to return

April 30, 1893, pain relieved, discharge entirely gone, heard the fork at one inch, watch 3 30, ordinary conversation at six feet May 10, 1893, tympanum entirely dry, no pain, hears watch at 20 30, tuning fork at nine inches, ordinary conversation can be heard at normal distance Patient expresses herself as feeling entirely well, hears everything at church or opera

Case 4—E M, 39 years old first seen Jan 15, 1893 When four years old had a severe illness which was followed by a discharge in both ears This continued until eighteen years old, when the discharge ceased in each ear Two years later she suffered from severe pain in the left, for one week, when the drum ruptured, followed by the free escape of pus and relief from pain The running continued for some weeks, then ceased, since which time she had been free from discharge or inconvenience of any kind until two years ago, when her hearing began to fail, accompanied by some "neuralgic pain" in head, and distressing tinnitus Is now totally deaf to aerial conduction of sound, the osseous conduction being quite normal

After making unsuccessful efforts for her relief, I advised the removal of the ossicles and drum of the left ear, which we did on March 20, 1893 The operation was followed by considerable discharge for several days, but the hearing began to improve almost immediately, and the tinnitus to grow less The pain has been entirely relieved

May 18, 1893 Pain and tinnitus entirely relieved Hears tuning-fork at ten inches, watch at 4 30, ordinary conversation at two feet General health, which had been very poor before operation, is greatly improved Discharge has entirely ceased Tinnitus and pain effectually relieved

Case 5—F B, age 25 Consulted me Sept 21, 1889 In 1887 I had treated the sister of this patient for impairment of hearing due to impacted wax, and as she was impressed with the idea that something unusually skillful had been done for her, she informed me of a sister living in Breslau, Germany who had been deaf from early childhood, and suggested that possibly I might be able to give her relief. She was advised to send for her sister, who presented herself about two years later, giving the following history has suffered pain ever since she was old enough to remember At times it was so severe as to necessitate her going to bed, and could only be relieved by the hypodermic injection of morphia This pain was not confined to the ears, but seemed to be general over the entire head Does not remember ever having had discharge from the ears Noises in the head of almost every character were very severe, and caused her great annoyance She expressed herself as being entirely satisfied if she could be relieved of the pain and tinnitus, as she had given up all hope of ever hearing again She claims to have been treated without success in Berlin, Vienna, Dublin and London, and to have had a "nerve cut" three different times with the hope of securing relief from the severe pain

On examination we found the external auditory canal in each ear somewhat obstructed by an accumulation of inflammatory products, and very painful to the touch The drum of each ear was congested, markedly thickened, and so much retracted as to be immovably adherent to the promontory We found the Eustachian tube obstructed, which, however, promptly yielded to treatment, but without improving the hearing to any appreciable extent On careful examination of the hearing power she proved to be totally deaf to all sounds, regardless of their pitch or character The osseous conduction of sound, however, was perfect Of course the history and unfavorable results of the examination, except for the good bone conduction, compelled us to regard any hopes of improvement in hearing as improbable, however, feeling it our duty to at least make an effort to relieve the pain and tinnitus we concluded to remove the drum and one or more ossicles, as might be necessary Accordingly on Oct 3, 1889, we excised the drum and ossicles of the left ear The patient positively refused to take an anesthetic of any kind because a relative had died under its use This was the first case of this character that I have ever done under cocain The pain was quite severe during the operation, but being a woman of determination and pluck, she stood her suffering very well The malleus and incus both showed evidences of necrosis, and particularly the malleus, which was only about half its natural size, and through necrosis resembled in appearance and structure a piece of dried dead wood that one could with but little force crush between the fingers The meatus was packed with iodoform gauze and the patient kept quietly in bed for three days On removing the cotton she said she could hear our conversation and the noises in the street The tympanum was dry, pain almost relieved, tinnitus much less and patient feeling happy

Oct 12, 1889 There has not been a drop of pus, tympanum entirely dry, pain gone, and only a little pulsating tinnitus Hears the fork at nine inches and watch at 8 30, ordinary conversation at fourteen feet

November, 1889 All the above good results continue The patient feels so well satisfied with the results of the operation on left ear that she now makes a request to have the other ear operated on, as the pain still continues in it This, however, we refused to do at present

Feb 6, 1890 Again the patient returned to have the right ear operated on She was advised to wait a few months longer, so as to ascertain definitely whether the results of the operation on the left ear are positively permanent

May 9, 1891, or about eighteen months from the date of first operation, the right ear was operated on and a similar condition of the drum and ossicles found The results of operation were quite as satisfactory

January, 1892 Patient has been entirely relieved of pain since second operation Hears perfectly well with both ears Tinnitus entirely gone General health excellent and likes America so well that she has concluded to make it her future home

May 9, 1893 Has been entirely relieved of pain from date of second operation Tinnitus has not returned Hearing is entirely normal and all of these favorable results from the operation have been permanent for over two years

Case 6—B S, aged 81 In April, 1888, this patient consulted me for deafness, tinnitus and vertigo He gave the following history forty years ago while exposed to the sun's rays, was suddenly attacked with slight pain in each ear He became dizzy, fell to the ground, striking his head with much force, and was carried home in a semi-conscious state For three years prior to this attack had occasionally complained of a "fullness and queer feeling in the head" For seventeen weeks he suffered so much from vertigo as to prevent him from leaving his bed From the time of this accident, which was in 1848, to the year 1889, covering a period of 41 years, he has suffered more or less from vertigo, increasing tinnitus and deafness For the past ten years the vertigo would appear without warning and with such severity as to necessitate his having an attendant with him constantly During this period of ten years the tinnitus has correspondingly increased, and the hearing power in like manner become progressively defective He was entirely deaf to aerial conduct of both watch and fork, loud conversation could be heard at one foot In his efforts for relief he consulted many physicians making three trips to Europe for this purpose In September 1889, we suggested the removal of the drum and ossicles This proposition was accepted with great reluctance on account of his age, and more especially because he had been advised not to submit to any surgical operation We operated on the left ear Sept 12 1889, and found the drum in this case thickened and adherent to the tympanum, likewise the ossicles had undergone the aforementioned peculiar changes due to necrosis Six days after operation his hearing and tinnitus had somewhat improved, no pain, nor disturbance of any kind followed the operation

September 27, or fifteen days after operation, he states that nearly all pain and tinnitus has been relieved, has had but little vertigo October 18, pain entirely relieved, tinnitus much improved, slight vertigo remaining Nov 1, 1889, tinnitus and pain entirely relieved Hears ordinary conversation at seven feet, has had but two attacks of vertigo in three weeks April 6, 1890, operated on right ear with similar good result

July 6, 1890, has just returned from Atlantic City, and reports himself as entirely free from pain, vertigo and tinnitus, hears ordinary conversation at sixteen feet, watch at one inch, and fork at four inches

Sept 12, 1893, or about three and one-half years since first operation and two and one half years since the second, has continued in good health except a slight attack of dizziness, which, however, lasted but a few days Hearing power continues good

April 14, 1893, has just returned from a trip to the Pacific coast, where he spent the winter and enjoyed good health, being entirely free from tinnitus and vertigo He hears very much better than men usually do at his time of life

In the list of 154 operations, which I here offer for your inspection, it will be found that from Cases No 15 to 84 inclusive, we record 69 patients presenting the non-suppurative variety of middle ear disease Many of these patients suffered from distressing tinnitus, severe pain, staggering, vertigo, and marked impairment of hearing, while others complained of one or more of these same symptoms in a much less degree Their ages range from twenty-one to eighty-one years The time in which the patients suffered from one or more of these symptoms varies from two to forty years, while the time elapsing since the date of operation is from three months to four years The improvement in tinnitus and vertigo has been in many cases most striking and satisfactory, notwithstanding the little hope that could be offered for their relief in some of the cases before operation The probable improvement of hearing in this class of cases is, of course, not marked by so many favorable possibilities as in the suppurative variety, and yet a perusal of the carefully recorded results will be convincing that the operation in selected cases is now justifiably demanded From the results obtained in the class of cases that would properly come under the title of this paper, we beg to offer the following conclusions

I remark first, however, that this is an age when the public wish to exact from the profession a promise as to the definite outcome of any prospective operation It is proper and desirable that the *probable* result of an operation under consideration should be fully and carefully explained to the patient and his friends It is well that this should be done in the presence of your assistants or other auditors A disregard for this simple precaution has caused some honorable physicians, who have worked hard for the best interests of their patients, to be summoned into court by designing and evil-minded persons, who enter suit for damages because a supposed promise had not been fully realized We would, therefore, begin our conclusions with

1 Never promise positive results from an operation on the ear for the relief of tinnitus, pain, suppuration or vertigo This promise will often be exacted, but the present status of such surgical procedures is not sufficiently well defined to *warrant* us in promising the results which we may hope to attain

2 Probably no operation in the entire range of surgery (*if carefully performed*) is attended with so little disturbance, either local or constitutional, as excision of the membrana tympani, malleus and incus, when not complicated with necrosis of the tympanum, in fact, there are very few diseased conditions of the human economy that are so apt to be productive of good results as is excision of the membrana tympani and ossicles in certain ear diseases

3 Tinnitus, vertigo, impairment of hearing and pain are almost certain to be relieved by the removal of the drum and ossicles, if not dependent upon some structural changes in the internal ear

4 The longer the middle ear disease has existed (as characterized by tinnitus, progressive loss of hearing, pain usually not well defined, and possibly vertigo) the greater is the danger of some serious structural lesion of the internal ear, and therefore the less hope of materially improving the hearing power, *and yet even in extreme cases, the tinnitus*, vertigo and pain are more or less benefited, sometimes markedly so

5 If after due and proper efforts to relieve progressive aural diseases, you do not produce a speedy and marked improvement, no time should be lost in performing the radical operation, as by delay an internal ear complication may have become established, and this always makes probable benefit more doubtful

6 It is not well to express too much hope that the operation will materially improve *hearing* in long standing, non-suppurative cases, and yet, when the chances are so much in favor of its producing entire freedom from tinnitus and vertigo, and especially since there are such great probabilities of a rapidly progressing disease becoming arrested from the date of operation, it would indeed seem unfortunate if such patients were not offered the benefit of this doubt, if such it can be termed

7 In all cases where the membrana tympani is thickened, markedly retracted, and made firmly adherent by old inflammatory products to the tympanic walls, and where in this same connection you find the ossicles completely ankylosed, the function of these parts under such circumstances is of course entirely suspended, therefore in consequence of this condition, this part of the conducting apparatus can be regarded only as a foreign body, and, as such, the only rational hope for relief is through removal, which will in the majority of cases relieve tinnitus and vertigo, while, at the same time, improvement in hearing can reasonably be expected on account of the opening thus formed admitting the sound-wave which impinges directly on the stapes and fenestra rotunda

8 As a preventive of necrosis of the temporal bone, mastoid abscess, aural polypi and serious brain complications (when the result of chronic aural discharge) the *suppurating* ear should *not* be allowed to continue and thus become chronic If, therefore, under the usual methods of treatment the discharge does not permanently yield, it is certainly good and I might say imperative surgery, to promptly extract all fragments of the membrana tympani and necrotic ossicles, for in so doing you have taken the only rational step to obtain a cure of this always dangerous discharge, by first removing all foreign matter and thereby establishing a free drainage, and furthermore giving an opportunity of properly treating a diseased cavity that otherwise would be inaccessible, and, inasmuch as the writer has not met with any failures in this class of cases (when unaccompanied by extensive necrosis of the tympanic cavity), he is forced to express the belief that *timely surgical interference* can not be too strongly urged, for by so doing you eradicate the primary disease, and thus prevent these always serious, and ofttimes fatal complications

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MUCOCELE AND EMPYEMA OF THE ETHMOIDAL CELLS AND SPHENOIDAL SINUSES

CAUSING DISPLACEMENT OF THE EYEBALL —THEIR OPERATION FROM THE ORBIT

Abridged from a Paper Read before the Section on Laryngology and Otology at the Forty fourth Annual Meeting of the American Medical Association at Milwaukee

BY HERMANN KNAPP, M D

NEW YORK, N Y

The liquid which distends the accessory cavities of the nose may be serous, mucous and purulent My remarks will be confined to the ethmoidal and sphenoidal sinuses which form a group themselves, though their affections frequently extend to the neighboring cavities and vice versa

Only one sample of serous exudation has come to my notice, and that was not from my own practice, but from Dr Robert Abbe's, who, April 8, 1893, was kind enough to send the patient to my clinic for an opinion, to invite me to the operation and permit me to use the case and his notes for this paper

Case 1 —Distension of all the accessory cavities of the nose by a sero hemorrhagic exudation with cholesterin The patient, a girl of 16 years, had some trouble with her sight when in school Always had headaches Intellect clear Three years ago first noticed fullness on her eyes and exophthalmos, with impairment of sight in the left, which is now completely blind The sight of the right is going fast, but she has fairly good vision in a limited field Has mouth breathing from partial obstruction of the posterior nares

I gave, as the probable diagnosis mucocele or empyema of the ethmoidal cells and sphenoidal sinuses, which by encroaching on the orbit caused the exophthalmos and blindness I advised an operation from the orbit This was done by Dr Abbe, May 15 1893 He first punctured the tumor from the left orbit with an aspirator needle and obtained a brown watery liquid containing a large quantity of cholesterin He then made a curved incision along the upper and nasal border of the orbit, opened the tumor and liberated a very large quantity of chocolate brown fluid, saturated with cholesterin All the sinuses seemed to have coalesced With a finger introduced from the orbit into the ethmoido-sphenoidal cavity he could feel the point of a catheter pushed through the mouth against the anterior wall of the sphenoidal sinus, which wall he incised with a curved bistoury, and passed a strip of iodoform gauze from the orbit into the naso pharynx, thus establishing perfect drainage The operation was followed by moderate fever, the strip of gauze was soon removed and the sinuses cleansed with water which was injected into the orbital wound and escaped into the pharynx The secretion diminished to almost nothing, the eyes protruded less, the sight of the right eye seemed to improve somewhat and by June 5 the girl walked about and was in good general health

Case 2 —Mucocele of the ethmoid cells Operation from the orbit Recovery by first intention Miss H Joseph consulted me June 12, 1888, on account of protrusion of her left eye She had had difficulty in her left nostril for which she had been "burned" repeatedly I found the nasal passages free and without marked swelling of the walls The superior-inner wall of the orbit was bulging, hard, displacing the

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NOTE —By way of parenthesis I may mention that the lacrymal sac could be reckoned among those cavities It empties into the nose it has an erectile tissue at its outlet into the naso lacrymal duct Its diseases originate almost always in the nose not in the eye, show the same pathologic changes and are treated on the same principles as those of the nasal cavities They belong to the sphere of the rhinologist, as well as to that of the oculist eye Interior of eye and sight normal She consented to an operation five months later I made a curvilinear incision, laid the tumor bare, incised its wall and evacuated water and mucus The cavity was explored with a sharp spoon, and as there was no caries or granulation tissue present, no scraping was done Irrigation with corrosive sublimate, 1 5000, insertion of a silver drainage tube Wound syringed and dressed every day Almost no secretion Tube left off on the seventh day The tumor and exophthalmos disappeared There was no diplopia and no abnormality of motion of the eye, but the skin above the wound was anesthetic for six months The patient has been seen several times since The recovery is complete and permanent

A similar observation was the following

Case 3 —Empyema of the ethmoidal cells, operated from the orbit Speedy and complete recovery Mrs R W, age 55, had suffered from pain in the left eye and surroundings for two months No marked symptoms on the part of the nose Exophthalmos down and out Sight and motion of eye good In upper-inner corner of the orbit a hard tumor reaching down to the ligamentum canthi internum Operation Nov 3, 1892 Curved incision laying the tumor bare On opening of its wall escape of much pus The sharp spoon discovered a cavity three centimeters deep, with bare and rough walls which were scraped On probing no communication with frontal sinus, which had been suspected, was ascertained Syringing with bichlorid of mercury, 1–5000, insertion of a drainage tube On fourth day some swelling and painfulness in region of wound and behind eye, followed by evacuation of a great deal of pus Recovery since then undisturbed Tube removed on twenty first day Exophthalmos and orbital swelling disappeared Eye normal, no diplopia Was last seen seven months after operation, well in every respect, except some insensibility of left frontal region

Affections of the ethmoidal sinuses are mostly complicated with like affections of the ethmoidal cells, as the two following examples will illustrate

Case 4 —Empyema of ethmoidal and sphenoidal sinuses Opened from the orbit three years ago Discharge and fistula ever since, though improving Exophthalmos cured P J, a lad of 13 consulted me Aug 1, 1888, on account of protrusion of left eye, progressing steadily the last three months No marked symptoms from the nose The eye was pushed towards the temple, but freely movable In the upper half of the inner wall and the upper inner corner of the orbit a hard roundish tumor about the size of a cherry Not until April, 1890, did the patient consent to an operation The tumor and exophthalmos had increased Sight and visual field normal, but optic nerve raised and the retinal veins enlarged, showing pressure on the optic nerve, presumably from the bulging walls of the sphenoid Opening of the tumor liberated a great quantity of inoffensive, brownish, puriform liquid A probe penetrated two and one half inches into the depth of a cavity, there being stopped by bone tissue, evidently the posterior wall of the sphenoidal sinus Syringing brought out more of the coffee brown puriform substance Two drainage tubes had to be inserted, and up to this day they have been worn and the cavity syringed, which always brought yellowish white, puriform secretion Four months after the operation, when there was no diminution of the secretion, I sent the boy to Dr Lincoln, one of our best rhinologists, who treated his nose also made an opening into the ethmoidal cells The boy left off this treatment as it did not seem to have much influence on the discharge from the wound He has come to me at longer or shorter intervals I saw him last two weeks ago The exophthalmos and the tumor have disappeared and there is no discomfort except the necessity of keeping the two tubes in place and syringing the cavity daily The secretion has of late become very scant and the liquid injected into the orbital wound escapes through the nose, so that there is some hope of an ultimate recovery The silver tubes have blackened the skin around the fistulous opening I advised him to replace them by gold ones

Case 5 —Empyema of the ethmoidal and sphenoidal sinuses Operation from the orbit Thus far (four months) persistence of external fistula but with diminishing secretion Sam H, age 15 consulted me Dec 12, 1892 For many years has had offensive discharge from the nose, and for the last three years, exophthalmos of varying degree on the left side Eye pushed downward and forward Sight visual field tension, mobility and interior of eye normal Naso pharynx nothing abnormal except some swelling of the middle turbinated body Hard tumor in inner-upper part of orbit Opening as in the other cases Jan 26, 1893 Evacuation of a great quantity of brownish muco pus Interior of cavity rough, scraped with spoon Five days later, swelling of region of wound with stoppage of discharge February 3 I reopened and enlarged the wound, and made it deeper A good deal of muco-pus and blood escaped A new cavity, evidently the sphenoidal, had been opened, for the probe penetrated two and one-half inches straight backward The middle turbinated was swollen There has been a gradual diminution of the exophthalmos, the tumor and the discharge Patient feels comfortable and the injected liquid frequently flows into the nose and pharynx

Case 6 —Exophthalmos with rapid loss of sight from empyema of the sphenoidal sinus A strong, healthy-looking gentleman, C K D, age 50, came to me Feb 18, 1887 He said that three months previously, after a prolonged exposure and fatigue, his left eye protruded down and out, the lids were swollen, the sight had diminished, first in the center, then on the sides, and in four days was lost completely The protrusion of the eye began to diminish five weeks later I found the eye still prominent, but free from pain No abnormality in orbit discoverable Optic disc white, arteries small, pulsating on pressure I was puzzled as to the diagnosis A year later I was informed that a rhinologist in Washington, D C, while working in the interior of his left nostril, suddenly evacuated a great quantity of pus Now I was certain that the patient had had empyema of the sphenoidal sinus which, by an acute exacerbation, had caused sudden or almost sudden blindness by optic neuritis or pressure on the optic nerve in or near the optic foramen, a rare disease of which a few cases only are on record

In conclusion, I beg to report another example

Case 7 —Empyema of all the sinuses which terminated fatally by meningitis The patient, a stout woman of 57 years, came to my service at the Vanderbilt Clinic Jan 3, 1893, with a greatly swollen upper lid inner-upper corner of orbit and lacrymal region, and down and outward exophthalmos She had suffered long from naso-pharyngeal catarrh I plunged the knife deeply into the inner-upper part of the orbit, liberating a great deal of pus The probe penetrated into the ethmoidal cells and into the left and right frontal sinuses The cavity felt smooth, was syringed out and drained The patient, who had fever, was admitted to the hospital (New York Ophthalmic and Aural Institute) The fever continued At first there was secretion through the wound then it stopped, the temperature rose to 103 and 104, the pulse to 130 and 140 and the patient died suddenly Jan 15, 1893

The autopsy showed purulent meningitis at the base and convexity The pus communicated through the cribriform plate of the ethmoid and defects in the roof of the orbit with the nose and the ethmoidal and frontal cells All the sinuses contained this pus and had white even walls with scarcely any mucous lining One third of the left malar antrum was filled with pus Necrosis was seen nowhere, but caries in many places, also on the surface of the left turbinated bone

REMARKS

Reviewing these cases we find the different kinds of exudation represented

The first (Dr Abbe's), illustrates a serous exudation Such cases were formerly described under the name of hydrops antri, etc They are apt to fill different sinuses and break down the partition walls in and between them The liquid they contain is commonly chocolate brown and saturated with cholesterin It is probably a conversion, a retrogressive metamorphosis, of the sero mucous exudation

The second case was a plain and pure mucocele of the ethmoidal cells Primary union followed the opening and cleansing of the cavity

The same happy termination was noticed in the third case, though the contents of the cavity were more purulent than mucus Such issues may be expected in acute or subacute cases, where there is neither caries nor necrosis and polypi It is remarkable that the accessory cavities are not more frequently the seat of retained liquids than we are aware of, for their orifices are mostly small and all situated in the upper portions of their walls The reason of this, it seems to me, is that the exudations disappear, not so much by evacuation as by absorption, as soon as their source, the productive inflammation, has ceased Collections of pus in the anterior chamber of the eye quickly vanish when the corneal abscess spontaneously or by surgical interference has ceased to exist It is well known that during acute coryza the neighboring cavities fill with secretion which disappears when the coryza is over

The fourth and fifth cases were empyemas of the ethmoidal and sphenoidal sinuses in which the operation cured the exophthalmos and the tumor, but the secretion has continued though diminished in quantity The peculiar puriform secretion showed under the microscope the elements of pus, but bacteriologic examinations failed to find microbes

The sixth case, exophthalmos with rapid blindness, is very important and certainly rare In literature several such cases are mentioned, but I know of no other example in my own experience I imagine that empyema of the sphenoidal sinus may exist for a long time without producing eye symptoms, then suddenly, as we see in chronic dacryo-cystitis, an acute abscess develops which makes the tissue in the apex of the orbital pyramid congested and edematous, participating in the inflammation and causing blindness by optic neuritis or orbital cellulitis, compressing the blood vessels in the orbit, with subsequent retinal hemorrhage and thrombosis as we see in erysipelas, of which I described and depicted a marked case (Archives of Ophthalmology, Vol xiii, p 83) The periodic edema of the sub-conjunctival tissue, accompanied by more or less protrusion of the eyeball—which for want of a better diagnosis is called tenonitis—may also be caused by transient inflammation of the sphenoidal sinuses or posterior ethmoidal cells Under all circumstances it is well for oculists to keep this possibility in mind The case under consideration had been diagnosticated by nobody, though it was seen by many

In the seventh case, empyema of all the sinuses, the pus had evidently made its way into the cranial cavity through the cribriform plate and defects in the upper plate of the frontal sinus before the patient presented herself The operation came too late

I abstain from making any remarks about the diagnosis and prognosis of the ethmoidal and sphenoidal sinuses, as they are well enough treated in most text-books, and some excellent modern monographs[1]

The treatment of these diseases is very important, as a spontaneous recovery has scarcely ever been observed, whereas surgical treatment is free from danger, benefits almost all cases and produces a permanent cure in many Care of the nose, if there is disease, should not be omitted Even when exophthalmos is present, rhinologic measures should be more extensively tried than heretofore The ethmoidal cells may be opened from the middle meatus, where a pointed instrument at the hiatus semilunaris will readily penetrate into the anterior cells, producing in many cases an opening large enough for the evacuation of liquids and subsequent irrigation In others, the perforation has to be made through the upper meatus, mostly after partial removal of the middle turbinated, especially when its medial wall is conspicuously bulging (Zuckerkandl's bulla ethmoidalis) The same holds good when the sphenoidal sinus has to be opened The openings into the cavities should be large for they readily close again The interior of the cavities should be carefully probed and caries, necrosis, and polypi treated with a sharp spoon Operating in the depth of the nose is particularly difficult and tedious on account of the narrowness of the canals and the abundant hemorrhage, in spite of cocain The operation from the orbit, by a curvilinear incision, has the great advantage of offering a clear view on the diseased parts These parts can then be readily exposed, punctured or incised, and according to the exploration, irrigated, scraped, and drained An opening into the nose may be useful In the cases which I have seen to end fatally, the meningitis had mostly set in before the operation

The division of the frontal nerve leaves anesthesia for months, but is of no consequence Injuring the superior oblique muscle would produce diplopia It never has occurred in my practice and I do not think that the accident is difficult to avoid The expansion of the os planum and lower wall of the frontal sinus by the accumulated muco-pus crowds the pully away from the nose, so that a curvilinear incision along the orbital margin does not interfere with the tendon or pully of the muscle, as the anatomical specimen which I pass round demonstrates

In conclusion, gentlemen, let me say that the subject which I have taken the liberty to submit to your consideration, has an old, but widely scattered literature, yet not until very recently has it been systematically studied The impulse to this study has not been given by general surgery, nor by ophthalmology, but by the highly gratifying development of modern rhinology

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THE CURABILITY OF NASO-MUCOSITIS[1]

BY THOS F RUMBOLD, M D

SAN FRANCISCO, CAL

Part I

The Way the Question is Put—It is unprofitable to discuss an undefined subject To ask one to build a house without giving its dimensions is not consistent with business principles, because the amount of work to be performed can not be estimated. To ask one as to the curability of a chronic disease without giving the age, physical condition, etc, of the patient is just as inconsistent

"Can you cure nasal catarrh?" is the universal form in which this question is put, by both the laity and the medical profession, in the former it is excusable, in the latter it is not The question is asked precisely as one would ask about the removal of a corn from the foot, showing plainly an ignorance of the fact that the disease is found in various conditions, each of which must influence the ultimate result in any special case

On one occasion in a medical society, about fifteen years ago, a well-informed medical man, one who is a literary graduate as well, and a professor in a popular medical school, and who lectured every season on diseases in general, including a few lectures on diseases of the air passages, asked me kindly "Are you sure that you can cure nasal catarrh?"[2]

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[1] Berger and Tyrman Die Krankheiten der Keinbeinhöhle u des Siebbein labyrinthes Wiesbaden, 1886 and L Grunwald Die Lehre von den Naseneiterungen 1893

[1] The term "naso mucositis" is formed from the word mucosa the mucous membrane, with the usual termination "itis" that indicates its inflammation and the prefix naso which limits the inflammation to the nasal passage

I replied "Are you sure you can cure pneumonia?" He asked "What is the age of the patient? What is the stage of the disease?" I replied "What is the age of the patient afflicted with nasal disease? What is the grade of the inflammation?" His answers indicated that he did not know that nasal inflammation assumed various grades, or that these grades, determined by the age of the patient, etc , cut any figure in the length of time required for treatment, or affected the curability of the disease

As questions of a similar character are constantly being asked, I propose to give full answers to all such These answers will include the question of curability of every variety of the disease Every one old enough to ask these questions, should exercise judgment enough to know that an infant suffering from an affection of its nasal mucous membrane must have a different degree of inflammation from that of a person 20 years old, and that the nasal inflammation in this latter person must differ greatly from that of a person in old age

It is seen that to answer the question as to the curability of this disease, the various conditions, such as age, habits, customs, etc , which form the grades of the disease, must be given, so as to know—as in the case of the construction of the house—the amount of work and reparation the physician and *vis medicatrix naturæ*, respectively, has to perform

The Mechanism of Naso-Mucositis —I contend that naso-mucositis is the result of irritation of the sensory nerves alone by some means (this excludes heredity), and that this irritation is principally occasioned by exposures to cold and by excesses (tobacco and stimulants),[3] affecting the integumentary and mucous surfaces The connecting links between these surfaces, and the blood vessels, are the sensory nerves on the one hand and the sympathetic nerves on the other

The sensory nerves of the integument, or of the mucous membrane, or both, first receive the irritation, they transmit it to the cervical sympathetic ganglia, second, this produces a paresis of the sympathetic nerves that leave these ganglia to supply the blood vessels of the mucous membrane of the nasal passages, etc , resulting, third, in more or less enlargement of all these vessels This enlargement is the inflammation—is the naso-mucositis

I have said that the paretic effect manifests itself on the blood vessels in the mucous membrane of the nasal passages, this is true, but the blood vessels of other portions of the head also are affected at the same time—maybe not to the same extent—such as the eye and the brain

It is also evident, that as the effects of colds are transferred through the sensory and sympathetic nerves from the skin to the capillaries of the mucous membrane of the air passages, that if this membrane is maintained in an inflamed condition for a number of years, it will, reflexly, affect the skin from the nerves of the air passages, as we see in the dry, scurfy skin of the consumptive, and the enlargement of their finger nails, known as club-nails

Phases of Naso-Mucositis —An outline of the various phases of this disease, from infancy to old age is here given, sufficient to afford an opportunity for observing its gradual increase, forming various grades, and for observing the extension of the disease from the nasal passages—the locality in which it *uniformly* commences—into the Eustachian tubes and middle ears, the throat, bronchial tubes and lungs, the ethmoidal, sphenoidal and frontal cavities, ultimately reaching the brain through these cells, frequently affecting the eyes, stomach and heart This will do much toward defining the disease, which, as I stated at the commencement, is essential to the proper discussion of its curability, and will also afford an opportunity of presenting important facts that are paramount in indicating the proper course and length of treatment for the various grades

Infancy —Attacks of naso-mucositis are so very common during some portion of infantile life that one would not be far wrong in saying that all infants suffer from it in a mild or severe form

In the earlier stage, the mucous membrane of the nasal passages *alone* is affected There is no evidence of systemic perturbation until the nasal inflammation has progressed from six to fifteen hours, a sufficient length of time for the disease to assume a severity that will affect the body generally Soon after the cold is taken, the mucous membrane pours out a large quantity of mucus In a few hours the membrane becomes so much swollen that the passages are completely occluded It is at this time of infantile life that middle ear troubles frequently occur When the nasal passages are completely filled with swollen mucous membrane, the excessive secretion, which is fluid, is held, as it were, to the mouths of the Eustachian tubes, so that it is drawn into these canals and into the middle ear by the rarefaction of the air in the tympanum, where its irritating property produces inflammation of the middle ear, and afterward rupture of the membrana tympani

In proportion to the number of infants affected with nasal inflammation, the number whose Eustachian tubes and middle ears are affected is comparatively small A very unfortunate circumstance connected with ear trouble in infancy is, that many times neither the mother, nurse, nor the family physician has observed any symptoms of ear trouble until perforation of the membrana tympani had taken place It requires just such criminal oversight as this to prepare patients for the deaf and dumb asylum

The anterior portion of the inferior turbinate is all that is seen In all infants that I have examined, I have not seen the least evidence of any deflection of the septum nasi, and rarely is there any evidence of enlarged tonsils

Rapid Recovery of Infants —If proper care is taken, all evidences of inflammation will soon disappear The rapidity with which many infants recover from severe colds and the many severe sequelæ following these colds is such that not infrequently the complaint will pass out of the mind of the parents in a few years, or until some future recurrence of the illness brings the previous diseased condition to mind

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[2] I knew that he doubted its curability for he had informed me a few days previously that at that time he was unsuccessfully endeavoring to treat members of his own family who were sufferers from this complaint

[3] After the naso mucositis has affected the stomach, an attack of indigestion will so debilitate the system that a cold will result from an exposure, which, if the stomach were in a more healthy condition, would not have injuriously affected the patient

To repeat, all these subjective symptoms are proofs that the infant is suffering severely in consequence of attacks of cold in its *nasal passages alone*, the result of insufficient protection of the body, especially the head Very frequently the child's system is weakened either by over-feeding, or excessive covering of the middle portion of its body This debility—which is called the pre catarrhal stage by some—prepares the system, so that it is liable to take cold on less exposure than that which would affect a healthy child

Childhood —If an infant, subject to exposures, as are all infants, takes slight colds frequently, and survives and attains the age of childhood, its nasal passages, Eustachian tubes, throat and maybe its lungs will be so weakened that it will easily have attacks of nasal inflammation It will be liable to suffer from tonsillitis, earache and consequent deafness, weak eyes and headache as soon as it commences to go to school If the nasal inflammation has been severe and prolonged, it will prevent the proper growth of the child Inspection of the child's nasal passages with a good light, will give abundant evidence of much more severe and longer continued disease than that of the infant Frequently the inferior turbinate is not very large not proportionately as large as it was in infancy, but the middle turbinate is about one-fourth larger than the inferior turbinate If the inflammation has extended into the antrum of Highmore, as it is usually seen in cases in which the inferior turbinate is not enlarged, then crusts will be observed to form upon the upper surface of this turbinate Cases of this kind are usually placed in the category of "atrophic catarrh," but this is a serious mistake as will be demonstrated further on In these patients the tonsils are frequently observed to be enlarged, or rather there are enlargements on the tonsils[4]

The curability of the two grades mentioned above will depend as much, if not more, upon the observance of the rules of hygiene as upon any local applications that can be made

Youth of both sexes are very apt to contract what seems to be a primary attack of naso-mucositis, also due to ignorance on the part of their parents and to their own carelessness If the attack was a primary one, almost no treatment would be required, for a healthy mucous membrane would throw off the disease in a few days, but, as in the case of those in childhood, so with the youth, they have for many years been taking slight colds, these have passed out of mind, but they have weakened the mucous membrane, so that they take cold easily and oftentimes severely The severe cold is the one that causes them to visit the physician

The young woman of 17 years of age is usually insufficiently and imperfectly clad, resulting in colds being frequently taken This is especially the case during the winter season, upon the attendance of operas, theaters, lectures, etc This is the age in which young women are very liable to functional interruptions of a very serious nature

The brother of this young woman, who may be two years younger than she is, demands and gets twice the weight of clothing that she wears, of a better character and more properly distributed He would be sick in two weeks were he compelled to wear her unprotecting, irrational garments One reason that he is stronger than his sister is, because he is dressed so warmly that his system is not debilitated by the effects of colds His food goes to the formation of muscle instead of the production of heat as in her case Also, he does not suffer as the girl does from garments that unnaturally constrict the body

Why is such a strong young man a sufferer from nasal inflammation? Principally because he commits excesses in the use of tobacco, alcoholic stimulants, and in keeping late hours, etc All forms of dissipation are peculiarly conducive to naso-mucositis and to aggravation of the dangers of ordinary exposure

Partial Atrophy of the Mucous Membrane —The mucous membrane of the nasal passages of patients of this age will bear evidence of still longer continued and more severe inflammation than that of the younger grades By this time the inflammation of the inferior and middle turbinate processes has been so severe as to produce partial atrophy of the mucous membrane covering them, thus providing more space in the nasal passages than in the case of the infants, for the secretion formed there This is the reason why we have very few cases of acute inflammation of the middle ear in this grade, the secretion has an opportunity to flow away from the Eustachian tubes, which is not the case when the nasal passages are filled with swollen mucous membrane, as in infancy, as already mentioned

Tenacious Secretion —Instead of the secretion being fluid, as we see in the younger grades, in this grade, and in all succeeding grades, the secretion covering the inflamed membrane is tough and exceedingly tenacious This secretion adheres to the inflamed surface with such tenacity that it can hardly be removed with a brush and will resist the effect of warm water for a long time In the older grades this stream is observed flowing down the back portion of the pharyngo nasal cavity, frequently causing excessive gagging spells in the morning It is in this grade, in youth of both sexes, that we first see curvature of the septum nasi

Inspissated Secretion —If crusts are formed, it is due to the flow of secretion not *from* but *upon* the turbinate processes, as before stated In this place of lodgment it is inspissated by the heat of the nasal cavity

Atrophic Mucous Membrane —It seems self-evident that an atrophic mucous membrane can not form secretion as rapidly as a mucous membrane that is not atrophic, that is, one that is simply swollen In an atrophic condition the blood vessels and glands are atrophied How is it, then, that these debilitated glands pour out a greater flow of secretion than will mucous membrane whose glands are not debilitated? The mucous membrane that is simply swollen will not allow a crust to be formed on its surface, for the reason that the irritation occasioned by this thick, partially decomposed flow, that forms the crust, would cause the membrane to pour out sufficient fluid to wash off the thick secretion before the crust is formed Again, while a swollen membrane has sufficient heat to cause inspissation, its secretion, being of a fluid nature, would wash the thick secretion off its surface The dryness of an atrophic membrane allows the thick secretion to remain on its surface and the heat of the cavity inspissates it The method of proving positively that these surfaces do not form the crusts is the following a small quantity of cotton is laid gently upon the seat of the crust and allowed to remain there twenty-four hours It will be seen that the crust is formed on top of the cotton, demonstrating plainly that the secretion that formed the crusts flowed *upon* the turbinated processes The atrophy of this process, therefore, has nothing to do with the formation of the crusts, except that of giving it a dry, non-secreting place for lodgment

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[4] It is my opinion that these enlargements which have been called hypertrophied tonsils are growths upon the tonsils and not hyper trophied glandular substances

Overgrowths —Long continued inflammation in the septum nasi is the cause of the superabundant growth which we term, deviation of the septum If the inflammation had not maintained a larger quantity of blood there than normal, this larger quantity of blood would not have occasioned this overgrowth or curvature This is true also of enlarged turbinate processes, showing plainly that these overgrowths are due to long continued naso mucositis

Middle-Aged and Elderly Persons very commonly suffer from naso mucositis and in its most severe form When the disease has been contracted in infancy, or a little later, it has been aggravated continually by all the causes above mentioned throughout a long period, during which time it has made steady progress, while at the same time, the constitutional power of resistance and reparation has diminished in inverse ratio

The mucous membrane of these two grades is found in various conditions, but it is nearly always *in an atrophied* condition, yet not one in a hundred of them will have crusts formed upon the turbinate processes

Common Mind Troubles —In patients of these grades, the extension of the inflammation from the nasal passages to the brain, through the ethmoidal, sphenoidal and frontal sinuses, resulting in common mind troubles, is one of the most common and one of the most troublesome symptoms that the physician is called upon to relieve

GRADES

From the foregoing it appears that the naso mucositis, as seen in the child, requires the inflammation of the severity that occurred in infancy with the supervention of additional colds to form it, and that the inflammation, as seen in the nasal passages of youths, requires the severity and continuance of the disease as seen in infancy and childhood, plus additional colds to form it also This appears to be true of all grades of this complaint, and whether its curability is rapid or slow will depend upon the grade Of course there are a few exceptions to this formation of the grades as will be mentioned hereafter

The age, the susceptibility of the patient the medicaments employed, and the means of employing them, all of which have a controlling influence, unite in forming *the grades* of naso mucositis, embracing a period from infancy to old age Of these factors the most important is age Notations carefully made in several thousand cases, occurring in private practice during seventeen years, from 1875 to 1891, have plainly demonstrated

1 That the *causes* of the disease at one age vary in their effects upon the mucous membrane from those of another age

2 That the *diseased condition* of the various parts involved varies at one age from that of another

3 That variations exist in the *symptoms* of patients of different ages

4 That the length of *time* required for *treatment* varies according to age

5 That the *curability* and *ameliorability* of the disease presents the same variations as regards age

It is thus seen that the causes, the diseased condition, the symptoms, the number of treatments, and the curability, all vary according to age

Age not always the Guide —It is sometimes seen that young patients must be classed in grades more advanced than would be indicated by their age For instance, I have a young patient not over ten years of age, who must be classed in the fourth grade, because of the severity of the inflammation and the abnormal growths in his nasal and pharyngo-nasal cavities This inflammation has disabled his eyesight, caused imperfect speech, consequently affected his brain, and has prevented his growth Again, I have had patients of from thirty to forty years of age, with inflammation not more severe than those about twenty years old Such instances, while not very rare, are not sufficient in number to disturb the gradation

The Five Grades of Naso-Mucositis are as follows *first grade*, from infancy to the third year of age, *second grade*, from the third to the tenth year, *third grade*, from the tenth to the twentieth year *fourth grade*, from the twentieth to the fortieth year, *fifth grade*, from the fortieth year upward

I do not mean that there are five different kinds of naso mucositis, but that there are five grades of the same diseased condition The lines of demarcation between the grades are not of a marked character They blend into one another much as do the colors of the solar spectrum If we should divide human life into infancy, childhood, boyhood, mature and old age, we would not mean that there were five different kinds of human beings, but five different epochs or ages So it is with the different ages or grades of naso-mucositic inflammation A course of treatment that will cure an infant will not be proper for a patient in childhood, nor will the course that cures a patient in childhood be successful for one of an older grade, and so on through all the grades It will be seen, as we investigate the subject, that the liability to "take a cold," and its curability, is constantly in a certain relationship to the degree in which the mucous membrane is inflamed It might seem from the foregoing that all patients were first affected at the same age, namely, infancy While a very large proportion, indeed, a very great majority of patients are so affected, yet such is not all of my meaning What is meant, is that the age indicates the strength and the rapidity of the reparative powers The younger the patient the stronger and more rapid the repairing processes

The Conditions that Control the Number of Treatments and Their Period —The length of time required for treatment of naso mucositis must be varied according to age, temperament habits, severity of the disease, etc , of the patient, that is, according to its "grade" If the ears or eyes are involved, or the turbinate processes are enlarged or the septum nasi is deviated to the extent of partially occluding one or both nasal passages, or there exists an ozena or vocal disability, as any imperfection of pronunciation of words—which is really a brain trouble—or if the saliva flows from the lips, or the mouth is habitually open, or the memory has lost its retentiveness, or the mind can not be applied studiously without producing disagreeable sensations in the head, etc , the local applications and constitutional treatment will have to be lengthened If the voice has been weakened, or has been uncertain in singing or is wearied upon use, improvement in these respects upon treatment should soon be observed The same should be noticed as to the memory and the ability to study If the breath has been affected, as in ozena, a very *guarded* promise of recovery must be given, as this is a very hard phase of the disease to control I have had cases that I could not cure, even after over ten years of fall and spring treatments, once in a while a case seems to be beyond management, except while under more or less continuous treatment

(*To be Continued*)

THE TREATMENT OF DIPHTHERIA

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY F E WAXHAM, M D
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EMERITUS PROFESSOR OF LARYNGOLOGY AND RHINOLOGY, COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO

It is to be hoped that in the not far distant future the inoculation treatment of diphtheria will supersede or largely displace all other treatments The researches in the field of bacteriology, the discovery of the Klebs Loffler bacillus and the various experiments with ptomaines and anti-toxines are most assuring Yet notwithstanding the fact that Bering and Kitasato have clearly demonstrated that cultures, which will invariably kill susceptible animals in very small amounts, have their toxic properties entirely destroyed by the addition of the blood of an immune animal, and while the experiments upon animals have been such as to give us confidence in the future treatment of the disease by inoculation, yet for the present we must rely upon the well-tried methods of to-day

While mice inoculated with a virulent filtrate, neutralized by the addition of immune blood have remained immune to diphtheria for forty or fifty days, yet this method has not been employed in the human subject There are still great difficulties to be overcome and much experimentation still to be done before this treatment can be applied to man We ascribe all honor to the investigators who have already accomplished so much and look to them with interest and hope for the future

I shall not occupy your time in discussing the preventive treatment, important as it is, for it would only be to reiterate principles that are perfectly familiar to all

In considering the treatment of this disease we may for brevity, confine our remarks to four headings 1, nourishment, 2, stimulation, 3, internal medication, and 4, local antisepsis

In the treatment of this disease, nourishment is quite as important as medication, and the life of the patient often depends, not only upon alcohol, oxygen and the local use of antiseptics, but upon proper and abundant nourishment as well On account of the energetic employment of various remedies, the importance of feeding is often overlooked We sometimes neglect to inquire explicitly in regard to the amount that is taken, and we frequently find that very little is given when we had supposed that the child had been receiving a sufficient amount On account of the loss of appetite and the pain of swallowing, a patient often refuses all nourishment and there is sometimes an insane repugnance for all food, which can not be overcome by ordinary means In these cases we should at once resort to forced feeding We should endeavor at frequent intervals to give some nourishment by the mouth, while peptonized food should be given by enema If a patient absolutely refuses all nourishment by the mouth I would emphasize the importance of introducing a small gum elastic catheter into the stomach by way of the nasal cavities

After the introduction, a safety pin should be passed through the end of the catheter to prevent its slipping beyond reach It may be allowed to remain as it gives rise to but little irritation, or it may be removed and re-introduced at each feeding It, however, should be removed two or three times daily and cleansed and the nasal cavities flushed with a warm alkalin antiseptic solution Milk and stimulants in full quantities can be introduced through the catheter by means of a syringe, and I am convinced that many lives may be saved in this manner that would otherwise perish

There are those who oppose the idea of alcoholic stimulation in the treatment of this disease, but I believe it is the judgment of the profession generally that it is a very important remedy While mild cases do not require its use, yet in severe or malignant cases it is imperatively demanded It is a well-known fact that alcohol is one of the most potent destroyers of microorganisms in culture fluids Its benefit in diphtheria is undoubtedly due to its antidotal action upon the ptomaines in the blood In no other way can we explain the fact that alcoholism is not produced, even when it is given in large quantities When required, it should be given freely, at least one or two teaspoonfuls of whisky or brandy or its equivalent of alcohol, every hour or half hour, according to the urgency of the case In severe or malignant cases, other stimulants must also be given, as strychnia, musk and ammonia

In regard to internal medication, there is one remedy that stands out preeminently above all others While so-called specifics have come and gone, this one, the tincture of the chlorid of iron, has remained as one of our sheet anchors in the treatment of diphtheria No one claims it to be a specific, yet it is a fact that red blood corpuscles increase amazingly under full doses of this agent, hence its usefulness as an internal remedy, while its local effect as an astringent and antiseptic increases its efficacy It should be given in frequent and full doses, ten, fifteen or twenty drops to young children, all that the stomach will tolerate, and it should be repeated every hour or half hour Should it disturb the stomach, carbolic acid should be combined with it

There are other remedies, such as bichlorid of mercury, turpentine and chlorate of potash, that have been much used, but in very severe cases of pharyngeal diphtheria I believe they are too irritating to the kidneys and should be employed with caution In laryngeal diphtheria, where the kidneys are not frequently involved, however, the bichlorid of mercury is the most useful remedy at our command

The local antiseptic treatment of diphtheria is of the utmost importance It matters little what antiseptics are employed, providing they are thoroughly applied to the throat and nasal cavities Carbolic acid, bichlorid of mercury, pyoktanin, chlorin water and peroxid of hydrogen are agents that have frequently been employed with more or less success The results, however, will depend, not so much upon the remedy selected, as upon the method employed To spray the throat with the most effective antiseptic, leaving the nasal cavities uncared for will only invite failure, while to use an antiseptic solution that does not thoroughly irrigate the whole nasal tract will be inefficient

The bichlorid of mercury is undoubtedly one of the most powerful germicides at our command, and in the strength of 1-4000 is not irritating The peroxid of hydrogen diluted to one part to four of water is also efficient, but its use should be followed by a warm alkalin douche When the spray from a hand atomizer will reach the whole nasal tract it is to be preferred to the douche, as there is no danger of forcing the fluid into the middle ear This accident which will occasionally result from the too forcible use of the douche is an unfortunate one One of the most effective methods of treating the nasal cavities is by means of the soft rubber catheter, as first suggested by the President of this Section This should be introduced along the floor of the nasal cavities until it reaches the post-nasal space when, by means of a small syringe, a warm, alkalin antiseptic solution can be gently introduced and the whole nasal tract thus thoroughly irrigated The advantages over the atomizer are obvious for when the nasal cavities are obstructed the spray simply rebounds and the deeper parts remain untreated I would advocate the early use of the douche in this manner in all cases of diphtheria where there is the slightest tendency to invasion of the nasal cavities

It seems proven beyond doubt that the disease is primarily a local one, and that the constitutional symptoms are the result of ptomaine poisoning, this poison being produced by the bacilli which are found in countless numbers in the diphtheritic exudate How necessary, then, that the local treatment should be most thorough and efficient To recapitulate the indications in the treatment of diphtheria are to destroy, as far as possible, the bacilli by the thorough and early use of our most powerful germicides, to support the system and prevent the disorganization of the blood by abundant nourishment, free stimulation and full and frequent doses of iron

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PREVENTION OF DIPHTHERIA

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY J LEWIS SMITH, M D

NEW YORK N Y

The physician, when summoned to a case of diphtheria however mild, should never neglect the manifest and very important duty of preventing, so far as possible, its propagation to others Effectual measures to this end are within his power Dr H B Baker of Michigan, has published statistics, showing that in 102 outbreaks of diphtheria, the average number of cases, where disinfection and isolation one or both were neglected was 16, and the average deaths 3 26, while in 116 outbreaks in which isolation and disinfection were enforced, the average number of cases in each outbreak was 2 86, and the average deaths 0 66 Therefore prophylactic measures prevented 13 cases, and 2 57 deaths in the average for each outbreak in the total 1,545 cases and 298 deaths These statistics relate to one year (*Annual of Universal Medical Science*, 1888)

The remarkable success achieved by Prof Grancher in preventing the propagation of diphtheria, so that of 153 patients not having diphtheria, admitted by mistaken diagnosis among diphtheritic patients, not one contracted the disease is noteworthy The following are the measures so successfully employed by him a metallic screen surrounds the bed occupied by the patient, and all spoons used by him, forks and napkins, are immediately disinfected by being placed in boiling water, containing sodium carbonate, about one ounce to the pint The bedding and the clothes used are disinfected by heat and the floor, bedstead and walls are washed with corrosive sublimate solution Nurses and medical attendants wear blouses that are disinfected by heat each day, and they bathe themselves with a solution of corrosive sublimate or a 5 per cent solution of carbolic acid The success obtained by Dr Grancher, in a public institution, by such prophylactic measures easy of application, justifies the belief that it is possible by their early and continuous application, and the intelligent cooperation of families to limit each outbreak of diphtheria to one or a few cases

Prophylactic Measures to be Employed in the Sick Room —Usually, when the physician is summoned to a case, the diagnosis has not been made If diphtheria be suspected or ascertained the physician should before entering the sick room, remove his coat and vest, and cover his neck, body and extremities with a blouse as Dr Grancher recommends, or a sheet fastened around the neck It is necessary at the first visit, to examine the fauces, in order to make the diagnosis, and at subsequent visits in order to ascertain the progress of the disease In examining the fauces, most physicians sit in front of the patient, and in depressing the tongue a cough is usually excited, so that particles of muco-pus or of psuedo-membrane if it be present, are likely to be ejected upon the face, neck or chest of the physician These infected particles, however small, may communicate diphtheria to others Not long since a New York physician, who examined a case with me, seeing the precautionary measures which I employed, stated that they recalled to mind a painful personal experience A patient, whose fauces he was examining, coughed in his face, and he was conscious at the time, that something lodged in his beard, but his attention being directed to other matters he forgot to bathe his face and beard with a disfectant, and returned home His child of three years came to him, and after the usual incubative period, sickened with a fatal form of diphtheria It is not difficult to examine the fauces of a child standing by his side or behind him, so as to avoid to a great extent the danger to which I have alluded It has also been proposed to examine the fauces through a pane of glass, set in a convenient frame, which would allow a good view, and intercept any ejected particles of muco-pus or pseudo-membrane

I need not repeat the judicious advice of many writers on diphtheria, that all articles not needed for use by the patient should be removed from the sick room, such as the carpet, 'curtains, pictures and decorations, and no one not absolutely required should be admitted into the room The bathing of other children of the household with an antiseptic wash, disinfection of their throats and nostrils, the change of their apparel and their removal to a distant part of the house, or better to another house, are also properly recommended as precautionary measures When the physician has completed his examination and is about leaving the family, he should bathe his head, face, beard and hands in an antiseptic lotion, and during the subsequent hour or two he should avoid close proximity to other children if it be practicable

The suppression of diphtheria in rural localities, with intervening lawns or gardens between the domicils, and with only one or two families in each domicil, seems comparatively easy with the intelligent cooperation of families, but in a large city like New York, with its constantly increasing pauper population, and crowded tenement houses, the prevention of diphtheria is very difficult, perhaps impossible The difficulties in the way of prevention may be seen by the following case, which is by no means exceptional

On a midwinter day, I was requested to visit a sick child of a poor deserving family On arriving at the number I found a five story tenement house, so common in the poor quarters of New York, and learned on inquiry that Mr G , whose child was sick lived on the third floor Feeling my way along the narrow passages, dark even in the daytime, I was admitted into the sick room, ascertained by subsequent measurement to be 12x14 feet The occupants of the house were Mrs G , pale and careworn, and in her arms an infant of about two years, whose guttural respiration was audible as soon as the door was opened Its nostrils and cheeks were sore from the abundant acrid discharge and a large indurated swelling on each side of the neck extended from the ear downward A moment's glance without nearer approach, was sufficient for the diagnosis of malignant diphtheria, with a fatal termination not far distant The child had been sick four days, and without a physician on account of the destitute circumstances of the family Through a half-open door, leading into a bedroom too cool to be safely occupied, I saw three children silently gazing at their mother They reminded me of the penned sheep or calves in the East Side slaughter houses, seeing their companions one after another led out to slaughter, and quietly and resignedly awaiting their turn The mother said that she had two other children who were attending a public school, and were at home, except during school hours When questioned in regard to the origin of the disease, she stated that she was not aware of any exposure to a case of diphtheria, but offensive odors due to escaping sewer gas were often noticed in her apartments Since this case of diphtheria was reported, examination of the plumbing throughout the house has been made by the Health Board, and it is found to be of the old style in all parts of the building, and entirely inadequate to exclude the effluvium from the sewer This escape of the sewer gas is a constant source of peril to the twenty-two families occupying the house The child that I visited lived two days This case is related in order that we may perceive how difficult it is to prevent diphtheria in the large cities, with their tenement houses crowded with poor families, who frequently do not send for the physician or know the nature of the disease, until diphtheria has continued several days, and many have been exposed It will be recollected that two of the children in this family, constantly exposed when at home to malignant diphtheria, were attending without change of clothing, one of the public schools during the continuance of the case

Since many cases of diphtheria originate from exposure in places of public resort, especially in the schools, the protection of children in such places is a matter of very great importance The New York Health Board, no doubt, prevents many cases by excluding from the schools all the children coming from a domicil in which an infectious disease, is occurring, as soon as it is reported, but more stringent measures are required

Dr Augustus Caillé recommends the daily examination, by a competent person, of each pupil on his entering the school, and the exclusion of any one who has a sore throat, nasal catarrh, or blennorrheal ophthalmia He also recommends that each pupil be questioned whether there be sickness at home Certainly, thorough and searching measures must be employed against so insidious a disease if its propagation be arrested in a large city with its numerous tenement houses

Clinical observations have demonstrated the efficiency of the preventive measures related above, but additional measures to procure prompt disinfection of the air of the sick room are required For this purpose, I have for years prescribed the following disinfectant, and believe that it aids materially in achieving the desired result

℞ Ol eucalypti
Acidi carbolici āā ʒi
Terebinthinæ ℥vii
M

One tablespoonful of this mixture is added to one quart of water, and is allowed to simmer constantly near the patient Since these agents are volatile, they may also be employed without heat in the manner recommended by Dr Charles Smith of Australia He saturates with them towels placed on papers upon the bed of the patient or near him He states that patients who constantly inhale the vapor thus produced, and recover, do not have subsequent paralysis, a remark which corresponds with my observations The disinfection of the infected apartment, after the termination of the case, by burning sulphur in a moist air, as practiced by Health Boards, and the painting or calcimining of the walls and ceiling before the room is again occupied are still to be recommended, notwithstanding the prophylactic measures previously employed

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OBSERVATIONS ON ISOLATED CASES OF DIPHTHERIA

Read in the Section on Diseases of Children, at the Forty fourth Annual Meeting of the American Medical Association

BY W A DIXON, M D
RIPLEY OHIO

Diphtheria is a frequent and most destructive disease, a large and familiar outlet of youthful life Children of tender years are specially susceptible to it, and no condition of life seems to materially influence the liability to the disease The rich and the poor, alike, suffer severely from it

Sanitary conditions, as a matter of fact, seem to have little to do with its prevalence Though most writers characterize it as a filth disease, a view of its history shows that it pays little regard to filthy or cleanly surroundings

Dr Thursfield's observations as sanitary inspector of a district in England extending over twelve hundred square miles, show the number of fatal cases of diphtheria in the rural portion to be nearly three times that in the urban

Dr Longstaff at another period, in his report on the "Geographical Distribution of Diphtheria in England and Wales," shows that the disease was twice as fatal a malady in rural districts as it was in towns

Dr Buchanan has pointed out "that it has always displayed a marked tendency to prevail in sparsely populated districts rather than in centers of population "

Many authorities could be quoted to show that it prevails to a more alarming extent in country districts than in cities and towns in the Old World In this country, it prevails as frequently on the hilltop, in the clean and salubrious farmhouse, as in the valley or in the crowded city tenement houses, reeking with filthy squalor and nauseating vapors

As far back as 1735 and further, we have recitals of the disease appearing in inland towns of New England, and spreading thence gradually to the thoroughfares, and by the lines of travel till it reached the larger towns and cities This is the history of its outbreak and spreading, through all the past years to the present It often breaks out in an obscure locality, in an elevated situation, in a remarkably healthy place, in different families without any previous observable cause In some families practically isolated from every discernible source of infection, it passes like a plague through all the children As it spreads, and is conveyed from family to family, the further it gets away from the original outbreak, the milder in type it becomes, until some writers upon the features of the same epidemic differ as to its real nosology Those who see it early in the outbreak, see a veritable plague, a malignant diphtheritic membranous croup horribly fatal in its ravages

Off in the towns and cities, which by halts and steps it has reached, having passed every obstruction interposed to arrest it in its course, it comes to the children so modified by its many transmissions, it bears about the same relation to the original as varioloid does to variola, and dies out as an ulceromembranous angina, or some other less fatal throat affection

Since observations extending over a long period of time, and embracing so many countries besides our own, go to show that country districts suffer more than populous cities, that it attacks the young in the most sequestered situations and without a possible communication with the diphtheritic sick, that these situations are apparently free from all the conditions of milk, sewage, filth or other infection likely to develop the disease, we must look for a source in some other direction

Many authentic instances of the association of diphtheria in children and domestic animals are recorded, tending to show the relation existing and its communicability from the lower animals to man The reports of the local government boards of epidemiological and pathological societies are replete with statistics showing the relation

Dr Greenhow cites the coincidence of diphtheria with certain diseases among cattle, as portrayed by Drs Brocklesby, Hurd and Layard, early in the seventeenth century

Dr Ghizi says "There was a great resemblance between the epidemic angina, which prevailed at Cremona in the years 1747 and 1748, and a disease affecting the respiratory passages at that time, prevailing among oxen " He quotes many writers of that period who were "persuaded that the epidemic sickness amongst animals, and diphtheria prevailing, was of the same nature "

Severinus, who wrote in the seventeenth century also mentions, that a great mortality among cattle preceded the appearance of malignant sore throat Dr Thorne quotes the observations and experiments of Drs Low and Klein in England, as late as 1888, illustrating the connection between diphtheria in children and in cats

In our own country, Jacobi says "Probably the possibility of contracting diphtheria directly from animals, is very much greater than the danger from water or milk If that be so, many obscure cases, endemic or epidemic, will admit of a readier explanation than at present " He cites many observations of physicians upon diphtheritic infection of children from calves, lambs, parrots, pigeons and fowls The correctness of their deductions is strengthened by their finding in each case the diphtheria bacillus

Dr J Lewis Smith in the "Cyclopedia of the Diseases of Children," says "Observations are accumulating which show that diphtheria, or a disease closely resembling it, occurs among animals, and is sometimes communicated from them to man," and cites instances of epidemics in different localities, introduced by turkeys, pigeons, rabbits and other animals, establishing pretty conclusively the origin of the epidemics mentioned to be from the diseased animals and fowls in the locality

Since, therefore, distinguished observers have admitted that diphtheria is sometimes contracted from the lower animals, I am encouraged to hold from observations in my own practice, extending over a period of more than twenty-five years, that isolated cases in the country and also in the towns and cities, may be accounted for, in a similar if not identical sickness of animals, fowls and birds prevailing at the same time and in the immediate vicinity

The profession might profitably give more attention to this subject, because the intimate association existing between children and animals may be the fruitful source of many diseases other than diphtheria In the rural districts the animals generally receive as much if not more consideration than the children Children can and do in some measure care for themselves Nothing is spared in the management and care of animals and fowls

The association between domestic animals and fowls on the farm and the children is intimate When the animals are sick they instinctively appeal for help, and endeavor to get as near their protectors as possible The sick cat will be in the house, on the rug, and in the arms of the children if possible The caged sick birds claim and receive devoted attention The sick fowls are brought from their roosting quarters and cozily put to bed in a corner of the sleeping room, or around the cooking stove in the kitchen This occurs in good families, in well-to-do families in the country, and oftener than physicians suspect If there is communicability of diseases from animals to man at all, it is therefore no surprise to find them prevailing to a greater extent in the country districts, where animals and fowls are so numerous, and kept in such close association, than in the cities and towns

I will give a few instances of isolated cases of diphtheria out of a great number I have observed, to show that it is reasonable to conclude that the children were infected from the birds, fowls, pigeons or cats mentioned in each case No claim is made to indisputable correctness In no case was the membranous deposit microscopically examined The ordinary methods only of a plodding, artless country doctor were resorted to, which were convincing

In 1865, diphtheria prevailed as an epidemic in the section where I was practicing in Southern Ohio It was malignant in character and very fatal in its ravages Preceding and during this period, there was great fatality among the hogs and chickens in all that region Farmers are aware of the contagiousness of diseases among the stock, and are generally careful to note their presence, knowing well that the infective matter, whatever it may be, lingers long on their farms after the epidemic has passed by Many of the most prudent have learned to entirely cease raising stock so affected, for a time, in order to get rid of the disease They do not seem, however to understand the communicability from animals to man as they should It is also observable that great fatality prevails among the rabbits, pigeons, cats and even rats at times

So far back as 1865, I had but slight conviction of diphtheria being contracted from animals, and gave the subject very little attention As time passed on, however, and anxious parents so often cornered me into answering how their children could contract a contagious disease like diphtheria in their isolated and protected condition, I began to look for a more tangible and reasonable cause than infected air, bringing it long distances to select tender children for victims Hence these observations and conclusions

In 1865 I saw many cases in children living in the country, perfectly isolated from diphtheritic sick They had no opportunity in any way to be infected by other children In the family of Mr G, a well-to-do farmer, the children were seized suddenly with violent and malignant symptoms of diphtheria The chickens on this farm were sick and dying with a disease affecting the throat To care for the chickens well, as they sickened they were brought to the house and given a corner in the kitchen, where most of them died The children spent most of their time with the sick chickens The first child-seized died early with laryngeal stenosis The remaining three recovered, but each had characteristic paralysis following, and were long in recovering

Another case was a child in the family of Mr S, whose home was perfectly isolated The child had no possible chance of infection, living far from any case of diphtheria This child had a pet cat, which it nursed continually The cat had been ill some days prior to the child's attack and had a discharge from the nostrils The eyes were sore, it coughed and sneezed The glands of the neck were enlarged It died about the time the child was taken sick In this neighborhood, hogs and chickens also were dying at this time, of a disease the farmers called cholera The child exhibited all the symptoms of malignant diphtheria, with extensive membranous deposit, and enlargement of the cervical glands, and died within seventy-two hours of laryngeal stenosis

In the family of Mr F, living on a high hill, in a secluded locality, the children were seized with well-marked symptoms of diphtheria, malignant in type This instance is notable, because at the time there were no cases of diphtheria in all the country about The children were really isolated in the strictest sense The family had canary birds The birds were sick, some of them died Paralysis supervened in one or both feet of those which recovered The fowls on the premises also were sick, many dying of a similar affection It is reasonable to conclude the children were infected from the birds and fowls

The following year I met with true diphtheria in the family of Mr M, living in an out of-the-way place, thoroughly secluded from contagion, unless from sick and dying fowls

In 1869, a farmer, Mr K, had a large number of hogs die of what was called cholera At his request, I visited his farm and found about thirty hogs well fattened, dead, and many more sick They were taken with a cough, humid breathing, and had discharge of frothy mucous from the nostrils and mouth They rested on their bellies, with their feet drawn up under them Many of them had difficult breathing and crowing inspiration We opened the thirty dead hogs to obtain some clearer idea as to the character of the disease, and found in each, inflammation of the larynx, granular infiltration, spots of ulceration, and patches of membranous deposit In many, the trachea was inflamed and quite filled with exudation In some, inflammatory products in the lungs Very few showed any lesion of the alimentary canal This malady among the hogs was followed by an epidemic of true diphtheria in all that region, and by severe sore throat without membranous deposit

In quite every year from that time forward, I have noted instances of diphtheria in isolated homes in the country, where malignant sickness occurred among the animals I have frequently examined chickens which died during epidemics, and invariably found destructive inflammation with membranous deposit in the throat, and have observed recovering fowls suffering from paralysis

Recently my convictions have been so strong in favor of this animal infection theory, that I invariably inquire about and examine into the condition of the animals belonging to the place where children so isolated are taken with diphtheria, and rarely fail in discovering a source in some pet bird, fowl, cat or diseased stock on the premises I could state many instances noted in the last few years, and out of that number will give a few of the most striking ones of recent date

In April, 1890, a young son of Mr S was taken violently ill with unmistakable diphtheria There was no case anywhere in the country about, so far as known On the way to the residence, a healthily situated farm house, in a pasture on an adjoining farm dead and sick hogs could be seen At the residence it was found that the chickens were affected with a very fatal disease The little boy's pet pigeons were sick, some of them were already dead One or two sick ones had been brought into the house to receive good nursing The boy was devoted in his care of them They exhibited every evidence of throat disease, but were not examined critically as should have been done to make conclusions indisputable The boy passed through the various stages of typical diphtheria and convalescence seemed assured, when paralysis of the muscles of deglutition supervened It being impossible to nourish him artificially he died of starvation

The next case occurred in January, 1891, in a boy five years old, the son of Mr M, who lived on a farm in a healthy location with the best of hygienic surroundings There were no cases of diphtheria in all the region about The symptoms and conditions present were beyond all doubt those of malignant diphtheria The boy died on the seventh day, without any abatement in symptoms from the beginning To account for the source of infection, investigation revealed that the boy had a pet cat which he nursed and played with much of the time My associate, Dr A W Francis, assisted in the examination of this cat which was killed for this purpose We found the cervical glands enlarged and suppurating, the mucous membrances of the throat deeply inflamed with abundant membranous deposit, extending far into the trachea Also patches of ulcered membrane covered with muco-pus emitting an offensive odor We satisfied ourselves that the cat had true diphtheria, and that the boy had contracted the disease from the cat by immediate contact

In October, 1892, Mr W, living on a high hill in a secluded place, most healthy in all its aspects, early one morning reported his only child, a little girl, aged ten years, to have had croup during the night but was then better Dr Francis prescribed for it In a few hours the father returned reporting the child worse When seen half an hour later, it was found in extremis with tonsils, uvula and pharynx all covered with diphtheritic membrane, and extending into the larynx producing stenosis The condition forbade surgical interference and the child died in an hour from complete closure of the larynx

This child had three pet cats which she nursed, played with and made her constant companions The cats were sick, had cough and sneezing, a discharge from the nose, and died a few days before the child was taken sick We were, therefore, deprived of the opportunity of examining them

In November, 1892, Mr H, living in a secluded place, on a hill farm with good surroundings, and perfectly isolated, reported his son eight years old had croup during the night Dr Francis saw the boy soon and found a case of true diphtheria with membranous deposit and slight difficulty breathing He determined to open the trachea, and if possible save the boy's life, by an early operation He therefore returned to the office for instruments and assistance, and hastily returned, to find the patient dead Investigation as to a source of infection revealed again the presence of sick cats, exhibiting symptoms of sore throat

There is no reasonable way to account for the infection in all the cases mentioned, except we accept the animal infection theory It would require extraordinarily strong proof to dissuade me from the convictions expressed in this paper

SOME OBSERVATIONS ON TREATING CASES OF DIPHTHERIA

Read in the Section on Diseases of Children, at the Forty fourth Annual Meeting of the American Medical Association

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There is, perhaps, no subject at this time exciting more and deeper interest in the profession, certainly there is none more important than the management of cases of diphtheria In this connection some general remarks seem necessary with reference to the ravages of the disease The excess of deaths over births, which is depopulating the French nation to day, is largely due to diphtheria In England it is not confined to the large cities alone, but the rural districts are feeling its scourge[1] The same may be said of the United States, where there is a growing dread of the disease and justly so, because of the gradual increase of cases, and deaths as well, which quite an extended correspondence with the different State Boards of Health, also the mortuary registers show, conclusively proving two things 1, its infectiousness, 2, that the general efforts now put forth to stay its progress are inadequate

As to its infectiousness in man, this has long since been settled in the affirmative and the question now is, What creature is not subject to the disease? since flying fowl, creeping beast, as domestic animals or pets, are susceptible, and like flies have the credit of conveying the disease The cat's ability to contract and transmit diphtheria to persons has long been observed[2] Animal susceptibility to inoculations with diphtheria exudate and cultures of the same, has frequently been utilized, making them the experimenting ground by which important data have been obtained, settling the question as to whether diphtheria is primarily a local, or a constitutional disease, in favor of the former This has been proven by the elaborate investigations of Wood and Formad, Klebs, Loffler Abbott, Welch and many others But for the specific cause of the contagion we are indebted to Loffler for his discovery of the diphtheria bacillus, which bears his name And no less important are the investigations of Abbott and Welch, who have established the fact that in the Loffler bacillus, we have the etiology of diphtheria, a factor of paramount importance in regard to its rational treatment and prophylaxis, again to be referred to

With reference to the present effort not being adequate to stop the progress of the disease, we have to say that while this is true generally throughout the States, we are glad for one single exception which stands out conspicuously and alone, and is worthy of our respect and emulation We have reference to Michigan and its State Board of Health, backed as it is by legislative enactments, not only requiring scientific investigation of disease and tabulating the same, but by an enforced system of isolation and disinfection, which had reduced, in 1889, the average number of cases per outbreak from 11 66, in which isolation and disinfection was neglected, to 1 56 when it was enforced, and deaths were reduced from 2 65 to 22,[3] showing very plainly that the disease can not only be controlled, but that there is a possibility of stamping it out entirely Until other States are guided by the State of Michigan, they will continue to write large bills of mortality, which brings us to the vital question of

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[1] Thorne Thorne's Work England

[2] Noah Webster's Epidemic and Pestilential Diseases

[3] Restrictions and Preventions of Diphtheria Michigan State Board of Health Printed 1892

ISOLATION

In the management of cases of diphtheria, after what has been said it seems unnecessary at this late date and time to do more than refer to the excellent restrictions and preventions, even to minute details, issued and gratuitously furnished by a number of the State and local Boards of Health But the great necessity is to have *enforced isolation* Isolation, if not efficient, is no isolation at all For instance, to quarantine the house is not isolation, when there is only a board fence or a wall to scale, between the quarantined and coveted liberty Neither is it isolation, even against the physician's protest, for a mother of a poor family to separate and nurse one of her children sick with diphtheria in a down stairs, badly ventilated room, from the vitiated atmosphere of which she emerges to supply the others with the food which the husband is compelled to be absent to provide, for soon the whole family becomes a prey for the disease To meet such an emergency one of two things is necessary a nurse must be provided by the health authorities, or the patient removed to a hospital adapted especially for contagious cases Hence the great need for the latter, and provision for the former Therefore, to have efficient isolation we must have the State's legal enactments and popular support, as well as public and private cooperation, all of which will follow in the wake of an enlightened judgment and a just appreciation of the great responsibility which one individual owes to another, and the public at large

In view of the importance of isolation, as well as the trouble and inconvenience attending, the questions arising, What cases shall we isolate, and how shall we discriminate? are immediately forced upon us Some cases of sore throat having an exudate are contagious and some are not Under such circumstances it is always safe, particularly during an epidemic, to look upon all such with suspicion and treat the same as diphtheria, at the same time securing some of the exudate for microscopic examination, to determine as early as possible its true character

The Klebs-Loffler bacillus is the only micro-organism always and persistently present in the exudate which, if found, establishes the diagnosis [4] To do this satisfactorily will require a microscope with a one-twelfth oil-immersion objective, and in some cases the bacillus may be detected by simply staining from one half to three fourths of an hour a film of exudate previously spread on a cover-slip in a 2 per cent aqueous solution of gentian violet, wash in a 5 per cent solution of acetic acid, then in distilled water, dry in air and mount, preferably, in Canada balsam [5] This plan, however, may be confusing just at a time when it is desired to be positive To establish which, the inoculation of a culture fluid with a portion of the exudate will be necessary, which, after about eighteen hours in the incubator, if successful, will under the microscope reveal the character of the bacillus, which culture, if desired can be used to ascertain its pathogenic properties by inoculating a rabbit or guinea pig If the practitioner is fortunate enough to possess a good microscope, culture incubator and other appliances, he may possibly settle the question in doubtful cases If not he should send a sample of the exudate on clean, white paper, securely bottled, to a competent bacteriologist, who can in twenty-four hours determine its nature Every Board of Health should have *such a salaried appointee to carry out such investigations* It having been determined that the case is one of diphtheria the patient is isolated, if he has not already been, in the upper story of the house which has been previously cleaned and divested of all drapery, upholstery, carpets and everything excepting the barest necessities for the proper care and comfort of the patient, and at the disposal of the attendants, for more than one will be required in severe cases

They should be furnished with one or more large pails containing a 1-1000 disinfecting solution of corrosive sublimate, into which bed linens and garments of whatever character should be immersed before taken from the room Being free from the rattle of tin, two marked papiermaché basins, one to contain the disinfecting solution before mentioned, as the best in our judgment, and the other for water convenient for the attendant's ablutions after necessary contact with the patient Two or more covered chamber buckets, one always near containing a quart or more of a solution of chlorinated lime in strength of half a pound to a gallon of water, for the reception and disinfection of alvine dejections and promptly removed from the room, but allowed to remain in the bucket two or more hours before emptying into the closet In this connection there should be a liberal supply of towels and soap with a view to the absolute cleanliness of the person and the surroundings A spitting cup containing an 8 per cent solution of carbolic acid to receive the secretions and expectorations from the mouth, throat, lungs and nose, or a better plan is to receive such material on soft muslin rags, toilet paper or small squares of cheese cloth, and immediately burned Hence, the necessity in the room of an open grate, or stove, in which such expectorations can be cremated Such secretions being the most infectious, because, containing the diphtheria bacillus, should be most carefully guarded and utterly destroyed In absence of an ordinary stove, a gas or perhaps the objectionable coal oil stove, on which, with a view to prevent dryness of the air in the room and to disinfect the same, a vessel containing the following should constantly be kept simmering, a modification, we believe, originally suggested by Dr J Lewis Smith, N Y

℞	Ol cinnamomi	30 parts
	Ol eucalyp	180 "
	Acid carbolic	220 "
	Ol terebinth	420 "

M Use one ounce to a quart of water

An adjoining room should be appropriated to the use of the attendants, to the door of which needed supplies should be brought, and from which disinfected articles be removed for further disinfection with boiling water The visits to the kitchen by the attendants, where other members of the family are, perhaps children, should not be allowed To, or in, this room provisions can be brought and prepared as ordered for the patient, which brings us to the subject of

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[4] Annual address on the causation of Diphtheria by Wm H Welch, M D Transactions of Medical and Chirurgical Faculty of Maryland

[5] Löffler s Method

FOOD

In order to support the strength of the patient, the proper nourishment is a matter of the most vital importance Though anorexia is generally persistent, systematic feeding should be instituted early, and of such character as is suitable to the age and condition of the patient Fluid nourishment being most tolerant to the stomach, as milk, warm or peptonized, cold milk, beef juices expressed from broiled beef, beef peptonoids and other food more concentrated, as eggs, soft boiled, eggs and milk, and when stimulants, which are required early in severe cases, eggs and milk beaten up with brandy, also milk punch, should be judiciously given

In those cases where there is an unwillingness, or as is frequently the case, an inability to swallow nourishment, enemata of the articles just mentioned should be resorted to early, freely and continuously, until convalescence This can not be emphasized too forcibly, for by the early and continued support and maintenance of the vital powers, we thereby assist nature to resist and withstand the septic influence of the disease, and thus we often accomplish more than by over-much medication

LOCAL TREATMENT

The necessity for seeing diphtheritic cases early, can not be over-estimated and in our judgment should justify the request, on the part of the family physician, for a speedy summons in time of sore throat epidemics especially, for success in a great measure will depend upon the local treatment being employed early, vigorously and with a view to destroying the diphtheria bacillus and preventing the absorption of the poison, now known to be tox-albumen To accomplish this desirable result in

PHARYNGEAL DIPHTHERIA

First, disinfect the throat, and second, remove the exudate as fast as it forms

To accomplish this, begin by spraying the throat with a 1 10000 aqueous solution of mercuric chlorid, using one of the many atomizers, or if the child is sufficiently intelligent have it gargle with the same solution, which will make the throat safe to work with, to be repeated every three or four hours Then by means of brush or cotton swab, patiently and with care dissolve the exudate, by applying the following

℞	Papayotin[6] or trypsin	gr lxx
	Hydrar chlo cor	gr ¼
	Aqua distil	fʒ iv
	♍	

Apply every half hour until the membrane is dissolved, and at the same time every half hour alternately, disinfect the throat by using one of our safest antiseptics, the peroxid of hydrogen, though not a germicide[7], accomplishes the same result by interfering with the development of the bacillus Spray the throat, using from one-half to 15-volume solution, or full strength, which will aid in dissolving the exudate in its formative stage, but fails to do so later, when imbedded in necrotic tissue, for which reasons these applications should be faithfully applied, not even allowing the patient's sleep to interfere, for very frequently the fate of the case depends upon the first twenty-four hours of local treatment, which if persistently and efficiently done, we have reason to believe that the septic influence of the bacteria may be prevented, and instead of a lingering case, we will have a rapid recovery of the patient We, however, can not afford to confine our remedies to one or two, but suit the remedies to the case, hence, another very valuable and safe disinfectant and good antiseptic successfully used, where the other might be inapplicable, is a 10 grain solution of the nitrate of silver The solid stick or even a too strong solution, makes it difficult to distinguish the resulting coagulated albumen from the diphtheritic exudate, besides, we have thought that its frequent application tended or predisposed the inflamed mucous membrane to a necrotic condition finally resulting in hemorrhage

The forcible removal of the exudate and the application by means of cotton wrapped on a pincett, of the following

℞	Camphor	20 parts,
	Castor oil	15 parts,
	Alcohol	10 parts,
	Carbolic acid	5 parts,
	Tartaric acid	1 part
	♍	

is recommended by Grancher,[8] also Dr Turner of Glasgow, suggests a similar treatment but uses the application of parafin Being painful the treatment though successfully used in adults, is inappropriate with children, and further the danger of absorption from the wounded surface would be increased The same objection would apply, it seems to us, to Dr August Seibert's disc of hypodermic points, through which chlorin water is injected to destroy the bacillus, as it is now known that the bacilli are mostly on the surface of the membrane

Since the use of corrosive sublimate, first by Billotte in 1876, it seems to be growing in favor Rennert of Germany, reports repeated successes, by wiping off the exudate with the following

Hydrarg chlo corrosiv	1 part,
Acid tartaric	5 parts,
Aqua	1000 parts

The remedy is being largely used in England

In very young children, the repeated insufflation of washed sulphur, an application which can be thoroughly made where we fail with many other applications, by simply using a glass tube The good resulting may be attributed to the disinfecting properties of sulphurous acid, set free by the oxidation of the sulphur

As a topical remedy, we have used the perchlorid of iron in combination with glycerin, equal parts In hemorrhagic cases it does well With many it is the principal local treatment

Carbolic, boracic and salicylic acid, have their appropriate use as antiseptic gargles and sprays, but as every intelligent physician has his own way of using means to ends, these with many others if time permitted, could be named as suggestive of the fact that it is unwise to restrict our remedies but treat each individual case, not the disease Keeping in view and preventing if possible, the tendency of the disease to extend to the larynx as well as to the posterior nares If to the latter we have,

NASAL DIPHTHERIA

The nasal passage may be the primary seat of the disease, frequently, however, it is the extension of the pharyngeal affection This complication is recognized by the forced mouth respiration, the nasal passages being closed by the swollen mucous membrane which is covered with a grayish white lining, discharging a thin acrid muco-purulent discharge which later on, becomes greenish yellow tinged with blood

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[6] The best at our command being papoid

[7] George M Sternberg MD, on Disinfection, Hare System of Practical Therapeutics

[8] Le Progress Med, Sept 27 1890

The glands in the neck soon become involved, with earlier constitutional involvement than in the simple pharyngeal variety These unpleasant cases are difficult to manage on account of the intricate nasal passage which should be disinfected early by douching and spraying the nasal fossæ

The former can best be done by means of a perforated flexible rubber catheter, attaching the same to any ordinary syringe and by bending the patient's head forward, the nasal cavities can be thoroughly and effectually douched preferably with the peroxid of hydrogen, every three or four hours

The nasal passages may be sprayed with the same remedy, also with a weak solution of carbolic acid, or the corrosive chlorid, but some instructions to the inexperienced attendant will be necessary to the careful introduction of the nozzle of the atomizer, keeping it on a level with the floor of the nasal fossæ and parallel with the septum, so as to prevent wounding and the resulting hemorrhage The greatest cleanliness should be observed in these cases, using the 1-1000 chlorid wash, and the cremation of all nasal discharges But as intimated the exudate may extend to the larynx and the result is the most dangerous phase

LARYNGEAL DIPHTHERIA

Though the duality of membranous croup and diphtheria is not absolutely settled, yet the fact of their unity, being so regarded by physicians generally, and acted upon approvingly by boards of health is accomplishing good as a check to its spread The bacillus may primarily attack the windpipe, but like the nasal form it is frequently the extension of the disease into the larynx Its commencement may be recognized by a hoarse, croupy cough with aphonia and later a gradually increasing dyspnea These symptoms sometimes subside in a few days under the internal treatment of bichlorid and spray of the same from a steam atomizer, also lime water and 2 per cent solution of carbolic acid, or, the steam from lime slaking in any ordinary vessel having a perforated lid, to which a tin tube or pipe can be conveyed into a tent constructed over the child—not forgetting proper ventilation—or to the mouth of the patient We can not expect, however, as much from our spraying and local applications which are so beneficial in the laryngeal and nasal form of the disease In this connection and in this form of the disease, we wish to call attention to a remedy, the results of which have been recently so satisfactory as to justify further trial, namely, oxygen It should be given early because of the better oxidation of the blood The increased tone and strength, both to the nervous and muscular system resulting from the improved condition of the blood, allays nervous irritation and excitability and produces sleep All of which tends to assist the vital powers of the system to battle with the disease Three inhalations in succession of about twenty seconds each, allowing the gas to pass through a jar of antiseptic water should be given three or four times daily, or oftener, when there is labored breathing or a cyanotic condition But should the dyspnea increase, preparation will have to be made to intubate or perform tracheotomy, which leads us into the domain of surgery, upon which it is not our purpose to enter, further than to state that either operation gives the patient about equal chance Dr Stein makes the per cent of recoveries of the former 26 2 5 per cent and the latter 26 1-2 per cent The same author recommends intubation under three and a half years of age, and after that time the preference is for tracheotomy, excepting adults Dr Montgomery, however, who has had a large experience in intubating writes us that he has had 44 per cent of recoveries But in our treatment we should not forget

CONSTITUTIONAL REMEDIES

Just how soon the poison of diphtheria is taken up by the absorbents, and how much or how little is required to contaminate the system, we have no reliable means of determining That it is absorbed very rapidly we have only to recall the cases in our experience of heart paralysis after a few days of illness, and the amount to produce septic influence may depend largely upon the susceptibility of the person But Welch and Flexner have shown that 2 cc of filtered culture fluid contained toxic properties sufficient to kill a guinea pig So it is well to begin internal remedies early, and we can make no mistake by giving the chlorid of iron and quinin in large doses suitable to the patient three or more times daily, so as to obtain not only the tonic effect of both, but the antiseptic influence of the iron, or alternate or substitute for the iron the following

℞	Hydrar chlo cor	gr jss (1½)
	Syr aurant rub	
	Aqua āā	f℥j
	M	

Take from one-half to a teaspoonful every six hours The object being, as Dr Jacobi suggests, "to have its specific counteracting effects on the diphtheritic poison in the system"

Chlorate of potash is looked upon with less favor than formerly, because of its unfavorable action upon the kidneys

The complications or sequelæ of diphtheria in the form of paralysis of the uvula, arms or legs, can best be relieved by general tonics, change of air, we have found a sojourn by the sea of great benefit Obstinate cases yield to hypodermic injections of strychnia, from 1-20 to 1-60 gr three times daily Electricity will also be of service

Instead of summing up conclusions, allow us to say a word in reference to our future hope—

PROPHYLAXIS

1 Against personal infection, physicians and attendants should gargle the throat, wash the nasal passages, face and hands before and after visits, in 1-1000 solution of corrosive sublimate, and nothing short of a change of garments is excusable in going from a diphtheritic case to other patients

2 This paper would be more incomplete than it is, did we not refer to what modern bacteriologists are accomplishing for us, particularly concerning the prevention and cure of the toxic products producing the morbid symptoms which we more or less see in every case of diphtheria

Dr E A De Schweinitz, Biochemic Laboratory, Washington, D C, replying to our query, writes

"Experiments in this country and abroad have demonstrated that a substance (albumose) exists in and can be isolated from the cultures of the diphtheria bacillus which produces, when injected into guinea pigs, immunity in those animals from this disease" Hardly had we begun to ask the question, Why can not this immunity be safely rendered to man? when we learn from Germany that "blood serum" from immunized animals is an anti-toxine which gives immunity to the individual, and that Dr Aronson of Berlin, claims for his blood serum immunizing strength of 1–10000 for guinea pigs, for children weighing forty-four pounds, 4 ccm given subcutaneously, which doses afford positive protection if injected before infection, being inefficient in the disease's later stages

But "later investigations, particularly Behring, have proved that this property of blood serum to counteract the bacterial poison may be progressively intensified, so that by repeated inoculation, a complete, immunizing strength can be obtained, potent even against super-virulent bacteria cultures The injection of blood serum from such animals afforded not only protection against virulent infection, but aborted the already present infection and made it harmless, and therefore proved *a specific cure* for the indicated disease" If these facts can be established in this country and elsewhere, surely the "goal of therapeutic effort" is reached and the glory for the second Jenner is in reserve

DISCUSSION OF DIPHTHERIA

Dr J A Larrabee, Louisville, Ky —It is always well to give the patient the benefit of the doubt and treat the case from the first as though it were a true case of diphtheria until all doubt is removed I do not agree with one of the speakers that filth plays no important rôle in the production of diphtheria I think we have some points by which we can diagnose a case rather early in its course The constitutional disturbances of tonsillitis are sometimes very grave, but they are not followed by the blood changes as in diphtheria Albuminuria is present in almost all cases of diphtheria in the second stage Glandular enlargements are present in diphtheria We can not rely upon the appearance of the pseudo membrane I thoroughly agree that many cases have been caused by animal infection In regard to the preventive treatment I prefer the tincture of the chlorid of iron, and it should be given during the whole course of the disease It is usually not given in large enough amount I deem it the best protection against the disease It increases the number of red blood corpuscles, and thus renders it possible for a larger amount of oxygen to be taken into the body I am of the opinion that if from ten to twenty drop doses of the tincture of chlorid of iron are frequently given to children the appetite will still remain good I do not think that we have a better diuretic than the chlorid of iron In regard to the local treatment, it must precede or at least accompany the constitutional treatment Corrosive sublimate is, I believe, objectionable If it is used as a gargle or spray we are very apt to have some cases of death from it I have used the peroxid of hydrogen, and if carefully used it does very well Too strong solutions are apt to produce a slough It is almost impossible to spray or irrigate a child's throat, and for this reason I would recommend the insufflation of boracic acid and papoid, nitrate of silver is also entitled to consideration One case of diphtheria does not secure immunity for the patient, and hence I think the inoculation method doubtful, although I am very hopeful

GENERAL DISCUSSION

Dr C S Greene, Buffalo, N Y —I believe in giving the tincture of chlorid of iron in large doses along with quinin and whisky Of course nourishment should not be overlooked As a local treatment, the persulphate of iron in a saturated solution can be used In regard to the prophylaxis, I believe in the use of whisky and chlorid of iron I also think peroxid of hydrogen a good agent

Dr Foster, Chicago, Ill —I am sorry to see the chlorid of mercury trampled down and the tincture of the chlorid of iron used, both internally and externally There have been many good results from the use of hyrochloric acid and the chlorat of potassium I believe much of the good derived from the use of bichlorid of mercury is due to the chlorin present

Dr G A Lean, Pennsylvania —I do not believe that the bichlorid of mercury is usually given in the best way, and that it is frequently not given in sufficiently large doses The chlorid of iron, hydrochloric acid and the chlorat of potassium, which were in vogue so many years ago, are still the principal agents in the treatment of this disease

Dr Douglass, Detroit, Mich —I think we should not be too enthusiastic in the use of iron, unless we are sure there is a sufficient amount of fluid in the stomach to render it sufficiently dilute to prevent its escharotic action, thus preventing vomiting I think if the tonsils are much inflamed and swollen and encroach upon the air passages, it is well to cut into them I have never had this operation followed by septic poisoning I have found some of the tonsils soft and others hard, and in some it was surprising how far the inflammatory action had extended down into the tissues

Dr Cook, Chicago, Ill —I would like to know what per cent of cases of true diphtheria present albuminuria? I have treated many cases with pyoktannin with good results It has not been my experience to find albuminuria in all true cases of diphtheria Does the use of bichlorid of mercury increase the albumen in the urine?

Dr Ingalls, Chicago, Ill —I think our present treatment is about the same as our forefathers used I am of the opinion that the tincture of the chlorid of iron is a very good agent in the treatment of diphtheria I think it is well to combine it with glycerin and the syrup of tolu Before giving this combination a draught of water should be taken and the medicine held in the throat some little time before swallowing, in this way we get some local effects from it If the heart begins to fail, nux vomica is the best agent If laryngitis presents itself, I think the mild chlorid of mercury should be given until the bowels are moved Nourishment should never be neglected, milk being the best A child eight years old should have at least three quarts a day

Dr G B Dunmire, Philadelphia, Pa —I am a strong advocate of the use of bichlorid of mercury

Dr W A Dixon, Ripley Ohio —I believe whisky is valuable because it stimulates and carries the patient over the period of depression Mercury is also valuable We should use our judgment in the treatment of diphtheria Do not think we should be tied to any one remedy The tincture of the chlorid of iron has been very satisfactory to me So also has whisky and bichlorid of mercury Give plenty of nourishment

Dr F E Waxham, Chicago, Ill —In regard to the use of aseptic instruments, I wish to say, that cases of diphtheria vary greatly in virulency and for that reason along with many others, aseptic instruments should be used

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Blank Applications for membership in the Association, at the Journal office

RESECTION OF THE RECTUM FOR MALIGNANT DISEASE AND UNION OF THE DIVIDED GUT WITH MURPHY'S BUTTON

From the Secretary s Report of a Meeting of the Cambridge Society for Medical Improvement

BY HENRY O MARCY, M D
BOSTON, MASS

At a recent meeting of the Cambridge Society for Medical Improvement, Dr Marcy presented the following case

W S, aged 46, merchant During the early part of the summer Mr S first noticed slight pain at stool followed by the discharge of a little bloody mucus First seen late in July Upon the anterior wall of the rectum fully two inches above the anus, there was situated a well defined growth of an irregular ovate shape, about an inch and a half in its longer diameter The diagnosis of the disease appeared all too evident, but its location rendered surgical interference seemingly unwarranted When again seen in September, the growth had completely surrounded the bowel and much suffering was experienced because of partial obstruction Blood in considerable quantity was daily lost, and colotomy was at once advised He entered the hospital September 12th, the operation being performed the same day and was discharged the 26th, much improved, free from pain, but still losing daily a considerable quantity of blood Notwithstanding the various measures that were tried to control the hemorrhage it gradually increased to such an extent, that danger to life from this cause alone seemed immediate and imminent

He was re admitted to hospital on the 17th of October, and assisted by Dr A P Clarke, a modified Kraske operation was performed for the purpose of removing the diseased portion of the rectum To this end an incision was made posteriorly, about one inch from the anus and was carried upward in the median line upon the sacrum The coccyx and about two-fifths of the sacrum were removed, which gave room to dissect the rectum from its attachment, dividing the meso-rectum and entering directly into the peritoneal cavity from below Sufficient length of the bowel was brought down for easy manipulation The rectum was now divided two inches above the anus, and the constricting diseased portion was split open upon its posterior border, for the double purpose of ascertaining the limitation of the disease, and to aid thereby in the careful separation of the bowel from its anterior attachments, which at the base of the bladder were everywhere closely adherent The rectum was then divided above the growth, the diseased portion removed, measuring about four inches Quite a number of vessels were divided in the dissection, but they were easily secured

During the summer Dr Marcy had profited by the experiences and instruction of Dr J B Murphy of Chicago, in the use of his anastomosis button, which had been supplemented by experimental studies upon animals Dr H O Walker of Detroit, only a few days previous to the operation, had suggested to him that this method might be advantageously used in the restoration of the continuity of the rectum, although it had never been applied for this purpose

The ends of a large sized button were adjusted in the divided extremities of the bowel and compressed Owing to the thickness of the rectal wall, (the muscular coat of the upper portion being greatly hypertrophied) he reinforced the parts with a continuous suture He sutured the opening in the pelvic floor in order to prevent the prolapse of the small intestines, which had appeared in the wound, as also to cut off the peritoneal cavity from possible subsequent infection The posterior wall of the bladder was re-attached to the divided tissues, and a large part of the wound was closed by several lines of buried tendon sutures An iodoform gauze drain was inserted and dressing applied, Convalescence thus far is rapid and uneventful, the temperature scarcely reaching 100 per cent

Dr Marcy also exhibited an interesting specimen of cancer of the uterus removed by vaginal hysterectomy Mrs W, age 36, had suffered for years from a badly lacerated cervix, and had been operated on for the removal of a growth which had supervened Patient is extremely emaciated, and the disease had extended widely upon the vaginal margin The uterus measures quite four inches in depth and is several times larger than normal After division of the left broad ligament, the uterus was brought down and with it the right tube which was so distended with a dark colored fluid as to resemble a loop of the small intestine

Considerable sloughing followed, quite beyond the site of the application of the forceps, and a vesical fistula is the result This may require subsequent operation, otherwise the convalescence is excellent

November 10th —The button was removed the twelfth day, and the patient sent home the twentieth day after the operation A spring pad has been applied to the colotomy opening, and he has had the liberty of the house At present there is no evidence of the return of the disease If he remains well it is proposed to close the opening in the side and restore the continuity of the bowel

SELECTIONS

On the Treatment of Malaria and Diphtheria by Methylene Blue — In thirty cases of malaria with intolerance for quinin, the author has obtained good results by the internal employment of methylene blue The conditions of the cases are that there were no counter indications against its use, such as nausea, vomiting or polyuria

It need not be given in very large doses, for example 30 grams two or three times per day It should be associated with pv myristica to prevent the appearance of hematuria The dose of 50 grams per day for adults and 25 to 40 grams for children of four to eight years of age, suffices to obtain an action against the attack of malaria Methylene blue does not prevent new attacks but renders them less intense, the same as other anti-malarial remedies

In fourteen cases of diphtheria, the author has obtained notable amelioration, from painting with methylene blue of 10 per cent solution in water This substance, he states, is preferred to chromic acid, carbolic acid water, chlorid of zinc or sublimate, because it is not irritating to healthy tissues

In saturating the false membranes, it probably prevents the secretion of toxic substances, and opposes itself to the propagation of the bacilli

Ferreira, in *Bulletin General de Therapeutique*, gives twenty-one observations of infantile malaria treated with methylene blue He concludes that methylene blue merits large employment in infantile malaria —A N Kazem-Bek in *Revue des Sciences Medicales* —From *Vratch*

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 68 WABASH AVE., CHICAGO, ILLINOIS.
F. J. REBMAN, LONDON AGENT, 11 Adam Street, STRAND, LONDON.
W. H. LOWDERMILK & CO., WASHINGTON, AGENTS.

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

SATURDAY, DECEMBER 2, 1893.

THE VIRCHOW JUBILEE.

In our miscellany column of the issue of Nov. 18, we noticed the VIRCHOW Jubilee as a matter of current news, transmitted by cable; by the slower medium of the mail we have the details of that most interesting event.

Our Berlin special is a little late this week, owing to delays in the mails, but none the less interesting is the narrative, told in true German fashion, of the eventful day which celebrated VIRCHOW's entrance as a master in medicine fifty years ago. The venerable KOLLIKER for once left off looking through his microscope to attend the feast and do honor to his great associate, who has for many years without question, been acknowledged as the most famous medical man of our times. VIRCHOW is known by his writings to the medical men throughout the civilized world, and here in America are many who have been honored by a friendly grasp of his hand and a pleasant salutation, and we but feebly voice the sentiments of our ASSOCIATION, and of all medical men everywhere, when we join our German confrères in saying Hoch! VIRCHOW! Long life and happiness to the Father of Nineteenth Century Pathology.

MICROBIOLOGIC POISONS.

Microbiologic chemistry is opening to view a series of agents which are capable of influencing the system with greater intensity than any of our mineral or alkaloidal poisons. They are the *toxins* produced by the vital processes of pathogenic bacteria. As alcohol, a product of the growth of the yeast plant, produces when taken into the system a temporary abnormal condition, intoxication, so these agents, products of bacillary growth, exercise on the system temporarily as powerful an impression as disease itself. But as the disease producing effects of the *toxins* can be controlled by regulating the dose, it is not unlikely that among them some may hereafter be found to be of value in antagonizing dangerous poisons or in conferring immunity to certain diseases by exhausting the susceptibility of the individual to the morbific agencies. Indeed, successful experiments in the latter direction have already been recorded.

The tetanus poison is the subject of the latest published investigations in this line. In the fifteenth volume of the *Zeitschrift für Hygiene*, (No. 1) PROFESSOR LUDWIG BRIEGER and DR. GEORGE COHN give an interesting account of their researches. They cultivated the bacillus in veal broth containing one per cent. of peptone and one half per cent. of sodium chlorid. The cultures were passed through a filter of hard-burned porcelain, and large quantities of this filtrate were used in the research. The tetanus poison was separated by adding an excess of ammonium sulfate to the filtrate. It rose to the surface and was skimmed off with a platinum spatula. By placing it on unglazed porcelain plates the liquid attached to it was absorbed. This crude poison contained some ammonium sulfate, albumen and peptone. After numerous failures the experimenters succeeded in removing the albumen by careful treatment with basic lead acetate and a minute quantity of ammonia. By exposure for from twenty-four to forty-eight hours in a dialyzer, in running water, it was further purified from peptone and salts. Finally, the purified toxin was dried in vacuo at twenty to thirty degrees C. It consisted of transparent, slightly yellowish, inodorous scales, easily soluble in water. It is said to be not a true albumen as it fails to respond to the usual tests for this substance. The purified poison was fatal to a mouse weighing fifteen grams, in a dose of 0.00000005 gram. In one fifth of this quantity it caused tetanic symptoms, from which the animal recovered. If equally poisonous to man, the fatal dose for a man weighing seventy kilograms would be 0.23 milligram, or about one two-hundred-and-eightieth grain. The smallest lethal dose of atropin for a grown person is said to be 130 milligrams, and that of strychnin from thirty to one hundred milligrams. The author says: "From this, one can judge what fearful weapons the bacteria possess in their specific poisons." Against chemical and physical agents the dried and purified tetanus poison is not very resistant—even when protected from air, light and moisture it slowly loses its potency. It is soon destroyed by diluted alcohol, but absolute alcohol, chloroform and anhydrous ether do not injure it. In aqueous solution it is destroyed by small quantities of acids or alkalies, and it is even injured by passing carbon dioxid through the solution for three or four hours. On the other hand, oxygen when passed through a solution does not injure its potency, which is destroyed, however, by hydrogen sulfid.

EXACT ELECTRO-THERAPEUTICS A SPECIALTY

The subdivision of practical medical work in our large cities, and to a certain extent, also, in smaller communities, into departments that engage the special attention of members of the profession is not merely a result of the ever-widening field of medical knowledge, which of itself makes it impossible for any one man to master it fully, but points also to a sadder truth that should not be forgotten, namely, that medical skill in each department is yet so imperfect as to demand the undivided skill of a devotee This recognition of the advantages of special expertness is but a recent development in modern medicine, though once fully developed in ancient Egypt Thirty-five years ago there were even no ophthalmologists, the enormous work now performed by these specialists being but imperfectly done by the general surgeons To-day, the general practitioner or surgeon may at times measure a refraction or determine the presence of a heterophoria, but it is exceedingly seldom that they so far disregard the rights of the patient as to depend on themselves alone in such a matter

Other specialties are less fully recognized as yet, much dabbling being indulged in otology, laryngology, gynecology and abdominal surgery by good physicians who are not experts in these special lines, but this habit has the excellent excuse in many cases of necessity by reason of the impossibility of obtaining more expert skill on the spot, and the inability of the patient to leave home It is also warranted by the good results often attending intelligent work of this kind in acute cases But, aside from abdominal surgery, which has such a host of self-satisfied experts, few amateurs in these several specialties honestly believe that their own efforts cover all possibilities for good to their patients The need of greater skill in difficult cases is fully admitted by them

This natural deference to the possibilities attending a special training and daily devotion to a given department of medical effort is, as yet almost entirely wanting in the attitude towards one of the newer specialties, that of electro-therapeutics No one would for a moment presume to pass judgment against ophthalmology, because his clumsy use of a newly acquired set of instruments failed to enable him to properly extract a cataract, yet this is precisely the attitude of many well-meaning physicians who import from Paris, or elsewhere, a complete set of batteries and electrodes and proceed to attempt some of the most delicate applications of electric energy to internal organs The object aimed at may be praiseworthy, and even the results may be excellent, as we have often heard attended first attempts in abdominal section but the method is bad, for it involves the use at once in major work of a powerful instrument of which the user is necessarily ignorant A peculiarity of this specialty is that, to the qualifications attending expertness in other specialties, such as a particular pathologic, diagnostic and therapeutic knowledge and manual dexterity, there must be added a full acquaintance with the physics of a great natural force, which separates it at once from specialties in which material substances alone are to be handled A material substance or procedure may achieve results varying with the expertness of the operator, but the possibilities of increasing its value in good hands are necessarily limited and easily defined In electro-therapy, material results are attained by the application of a force which is capable of almost infinite extension in degree, together with various modifications in quality, resulting in a variability in effect only possible in a force of nature

These intricacies and latent possibilities of electricity in medicine and surgery are yet by no means a bar to its intelligent use by any broad-minded practitioner who may be determined to afford his patients all that science can offer at his hands It is, in fact, his duty to test the effect of all well-recommended remedies in cases that prove refractory to tried methods, but unless himself an expert electro-therapeutist, he has no right to assume that electro-therapeutics is a failure in a given class of affections, simply because his own imperfect efforts have not succeeded His ethical duty to his patient and science should impel him to question his own skill first, and to ascertain if better results could not have been attained had he served the apprenticeship to the art, that is essential to the highest development of skill in any department of human effort

SALE OF PREPARATIONS CONTAINING POISONS

A new and unusually interesting question has just been raised in England, of almost as much importance here as there, namely, whether a proprietary medicine containing a poison in very small quantity is a poison within the meaning of a statute which makes it unlawful "for any person to sell or keep open shop for retailing poisons unless such person shall be a pharmaceutical chemist or a chemist and druggist," as there termed The County Court Judge, who first heard the case, which was an action brought to recover the statutory penalties, gave judgment for the defendant, and the Queen's Bench Court Division of the Supreme Court of Judicature, to which appeal was taken, has decided (under date of Oct 31, 1893) the same way, dismissing the appeal In a case decided a little before this one, it was held that a compound containing one or more of the scheduled poisons as one of its ingredients was a poison In that case, however, there was evidence that there was sufficient morphin in the bottle sold to kill an adult In this case, a resident of Manchester, not a qualified chemist, who keeps, as *the English say*, a shop, called a "drug store," sold a bottle of "licoricine," apparently duly labeled, as required by law The contents of the bottle were analyzed Morphin was found in it The actual quantity was not estimated, but the analyst said there was "more than a trace," and there might have been one fiftieth of a grain per ounce, or three-fiftieths in the bottle He was not prepared to say whether taking the whole contents of the bottle would do an adult any harm The analyst was, by the way, purposely left uninstructed about finding out the quantity, in order to raise the question of whether the mere presence of a poison was enough to secure a conviction The Queen's Counsel maintained that the object of the law was to prevent unqualified persons from dealing with morphin and similar poisons at all It would be no answer for the seller, who disposed of morphin by itself *in very small* quantities to say it could not possibly be injurious It was therefore no answer that it was mixed with other drugs, as here, unless, indeed, it could be said to have changed its character But the court, as already stated, looked at the matter otherwise, declaring the offense not proved, because there was so little evidence as to quantity, and denying a further appeal, when it was sought to take the case further

RIGHT OF PHYSICIANS TO AN APPEAL IN MONTANA

The act of the Montana Legislature of 1889, after providing for the organization of a Board of Medical Examiners, and prescribing its duties in respect to the examination of applicants desiring to practice medicine and surgery in that State, as to their qualifications to be licensed *thereunto*, and for the issuance of a certificate of license by said board to persons found duly qualified, further provides that "such board may refuse or revoke a certificate for unprofessional, dishonorable or immoral conduct, or refuse a certificate to any one who may publicly profess to cure or treat disease, injury or deformity, in such a manner as to deceive the public In all cases of refusal or revocation the applicant, if he or she feel aggrieved, may appeal to the district court of the county where such applicant may have applied for a certificate " This provision for appeal in such cases appears to have been held unconstitutional by one of the district courts, but the Supreme Court of Montana pronounces it constitutional in a decision rendered Oct 2, 1893, in the case of State v District Court The statute, it says, takes no constitutional jurisdiction from any *court* in the State, but invests the district court with jurisdiction of a class *of* important cases, to come into it, by way of appeal from the action of the Board of Medical Examiners, just as other statutes on the same footing provide for other important cases to come into the district court by way of appeal from the primary action of other boards or commissioners Nor does it consider that a physician's right of appeal, with such a hearing as the Legislature contemplates he shall have in the district court, can be denied, because no special rules of *practice* to be followed therein were prescribed No doubt the Legislature contemplated that such proceedings should be conducted in such an orderly manner as that no substantial right would be denied The court being wise in the law and all its analogies, would, it might be confidently expected, adopt such appropriate procedure in the adjudication as would vouchsafe to the accused and to the prosecution a proper hearing, *and thereupon such* judgment would be pronounced as *the law* and *justice of the case would warrant* on the facts shown.

THE APPLICATION BLANK AND ITS USES

Blank applications for membership in the AMERICAN MEDICAL ASSOCIATION have been sent to many gentlemen who are now members It was not practicable to expend the time necessary to sort out from State Society lists the names of those who already belonged to the ASSOCIATION, and so the entire list of several States were furnished with application blanks. It was also intended as a pleasant reminder of the best means of increasing the ASSOCIATION membership *That is*, for each member receiving the blank to make an attempt to secure an additional member by application Our already great ASSOCIATION will grow greater, and greater, exactly *as fast as our members* become enthusiasts in its support *In what noble* general movement can our profession hope to succeed, without organization? What expectation is there of forming any other great medical organization to take the place of the old AMERICAN MEDICAL ASSOCIATION ?

Use the blanks then, dear readers, in aiding to build what you may, if you choose, make the greatest medical organization in existence, and one with great power for good to all mankind

ASSOCIATION NEWS

The American Medical Association Journal —*Let it be remembered* by every State Medical Society in America, and by every district or sectional society, that the American Medical Association is the only officially organized body of the profession With a loyal, energetic *effort on* the part of the present membership of this society, aided and abetted by the ASSOCIATION JOURNAL, which, under the present management is improving in every issue, there can be no doubt that within a very short time *the membership of the* ASSOCIATION can be quadrupled, and it will not be long until it surpasses in numbers, strength and influence the British Medical *Association*

With such a support, both moral, scientific, and financial, what have we not a right to expect from the JOURNAL? Indeed it will soon be the leading medical journal in the world.—*St. Louis Medical Mirror.*

Change of Date of Meeting—Official Notice.—In order to enable the State Medical Societies to send instructions as to their action in the matter referred to them by the AMERICAN MEDICAL ASSOCIATION at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the ASSOCIATION at San Francisco has been changed from the first Tuesday in May to the first Tuesday in June, 1894.

WILLIAM B. ATKINSON, JAMES F. HIBBERD,
Permanent Secretary. President Elect.

SOCIETY NEWS

Southern Surgical and Gynecological Association.

Abstract of the Proceedings of the Sixth Annual Meeting, held in New Orleans, Louisiana, Nov. 14, 15 and 16, 1893.

FIRST DAY—MORNING SESSION.

The Association convened in the assembly room of the Medical Department of Tulane University and was called to order by the President, DR. BEDFORD BROWN of Alexandria, Va., at 10 A.M.

Prayer was offered by the Rev. B. M. Palmer of New Orleans.

An Address of Welcome was delivered by DR. ERNEST S. LEWIS on behalf of the local profession, which was responded to by PRESIDENT BROWN.

DR. A. B. MILES of New Orleans then reported, as Chairman, on behalf of the Committee of Arrangements.

The reading of papers was then proceeded with, and the first paper read was by DR. HOWARD A. KELLY of Baltimore, entitled

DIAGNOSIS OF PELVIC INFLAMMATORY DISEASES.

He called attention to certain common sources of error in making diagnosis of pelvic inflammation. An erroneous conclusion is often reached in these cases both by general practitioner and specialist by relying for the diagnosis upon such symptoms as dysmenorrhea more or less persistent pain in the pelvis, attacks of pain confining the patient to bed, diagnosed as peritonitis, difficult locomotion cachexia (due to morphia habit), tenderness on pressure over the ovarian region, and extreme tenderness at the vault in a vaginal examination. Such a group of symptoms frequently characterizes a false or pseudo pelveo peritonitis, in which there is actually no demonstrable lesion of any pelvic organ.

In order to make a diagnosis of true pelvic inflammatory disease the inflamed structures must be regarded as of secondary importance in reaching a diagnosis. Even the patient's observation that she has passed a quantity of pus can not be relied upon, unless the pus is seen by the physician as patients often mistake muco purulent discharges from the uterus for the emptying of an abscess. Fever, and especially recurrent attacks of fever, are valuable aids in making the diagnosis but fever is generally absent, even in abscesses when the pus is encapsulated. The direct examination, the sole test, is made by the vagina, or by the vagina and lower abdominal wall, and the diagnosis of pelvic inflammatory disease is made when a definite hard resisting mass is felt on one or both sides of the cervix.

Through an empty rectum these masses are still more distinctly outlined. When the disease is not quite so evident, a bimanual examination through the rectum and abdomen should be made, carrying the index finger of the lower hand above the rectal pouch behind the uterus and laterally out on to the broad ligaments. The most minutely accurate examination of the pelvic organs which can possibly be made is called for when ovaries and tubes are enclosed in delicate bands of adhesions which allow considerable mobility to structures not enlarged. This is accomplished by the *trimanual method by vagina rectum and abdomen simultaneously*, under anesthesia.

Dr. Kelly exhibited his corrugated tenaculum devised to facilitate this examination. The point of the tenaculum is caught in the anterior lip of the cervix which is drawn down to the hymen, and the tenaculum is held between the third and fourth fingers and the ball of the thumb, while the index finger is introduced into the rectum and, aided by the hand making pressure above giving a plane of resistance, is enabled to examine minutely the posterior surface of the uterus, and all surfaces of the ovaries and the tubes, detecting the slightest adhesions binding these organs down. The examination under anesthesia is a matter of the utmost importance and not sufficiently appreciated. Without anesthesia the most accurate examinations are impossible, it is therefore a sine qua non to the diagnostician.

DR. C. KOLLOCK of Cheraw, S. C., followed with a paper entitled,

THE CONSERVATIVE TREATMENT OF PYOSALPINX.

He said in cases of pyosalpinx, much caution and a very careful and rigid examination are called for to determine the cause of the presence of pus, the length of time it has been there, and the condition of the walls of the tube in which it is found. Attention should also be given to the peritoneum and ovaries, but above all, there should be the strictest inspection of the endometrium, a disordered condition of which contributes much to the production and continuance of pus in the tubes.

Within a year or two, changes have been made in the treatment of pyosalpinx, and conservatism now enters largely into its management. Men of high position in the profession are more decidedly agreed that a moral obligation rests upon us to relieve patients without the sacrifice of any organ, or part of one, when this is compatible with safety. Recently Polk, Pryor, Krug, Boldt and Dudley had reported to the New York Obstetrical Society a number of cases of pyosalpinx treated by the conservative method now in vogue. This treatment, when faithfully carried out by curettement and aseptic divulsion, has not only been successful in saving the tube and ovary on the non affected side, but in several instances the diseased tube was entirely relieved of the presence of pus. That many cases of pyosalpinx have been accurately diagnosticated and radically cured without the mutilation of any part of the sexual organs, is well authenticated. Dr. Kollock's experience, while limited compared to that of others, has been sufficient to convince him that the conservative system of practice is bringing us to that period when the mutilation of women, once supposed to be necessary, should cease.

Dr. Kollock then reported a few cases of pyosalpinx which had fallen into his hands, the happy termination of which had placed him under obligations to the pioneers in the conservative treatment. All but one of four cases were relieved entirely without resorting to celiotomy.

DR. GEORGE J. ENGELMANN of St. Louis, emphasized the importance of administering an anesthetic in examining patients with pelvic inflammatory disease, before serious operative procedures are entered upon. It was not alone the anesthetic, however but the practiced touch.

DR. JOSEPH PRICE of Philadelphia, alluded to 'dropsical tubes," as being a group of cases that puzzled the practitioner from a diagnostic point of view, and later surgically. Angry pus cases, while acute in their early history, were simply cases to be dealt with surgically. The attacks of pain were numerous, and fixation and tenderness characteristic symptoms. Everything in the pelvis was board-like, and when the surgeon got into the abdomen from above, it was difficult to distinguish the uterus from the appendages and vice versa. These were trying cases to deal with.

DR. JOHN D. S. DAVIS of Birmingham, Ala., said he was in favor of evacuating pus wherever it was found in the body. There were, however, some cases in which pus could be removed without sacrificing the ovaries or tubes. As to the use of an anesthetic, he considers it absolutely essential in the examination of doubtful cases, but where the diagnosis is plain it is not necessary.

DR. R. B. MAURY of Memphis, said the great difficulty in the class of cases referred to by Dr. Kollock, in which there was pelvic inflammation associated with muco purulent discharges from the uterine cavity, was to decide whether there is pyosalpinx. We have what is denominated endometritis associated with it normal discharges and exudation in the pelvis but Dr. Maury says he is at a loss sometimes with the most careful diagnostic measures, whether under ether or without it, to form in his own mind an accurate *picture of what the precise state of things is in the* pelvis. The rule he has laid down in the treatment of such cases is, if they are acute, non puerperal or puerperal, that the woman is entitled to a certain period of rest and other measures non-surgical, before deciding upon a radical operation.

Dr W E B Davis of Birmingham, Ala, believes that, in the examination of patients, it is exceedingly difficult in some cases to make an accurate diagnosis without an anesthetic However, there were women who could stand the examination well without it

In regard to endometritis, by judicial and careful curettement, he believes many patients can be saved the necessity of an abdominal section The trouble is that practitioners often denounce one procedure and uphold another without outlining the indications for a certain position It is very important to cure the endometritis before it spreads to the tubes, etc

Dr R M Cunningham of Pratt City, Ala, was inclined to look upon endometritis in the vast majority of cases of disease of the appendages as the *fons et origo* of the whole affair, and he believes that the operation which has been systematized and popularized by Dr Polk is a safe, conservative and reliable procedure Furthermore in the hands of the general practitioner it would relieve many of those cases that go to the laparotomist

Dr Bedford Brown of Alexandria, Va, said the mobility of the uterus and its fixations were questions of great importance in diagnosticating pelvic inflammatory disease

Dr L S McMurtry of Louisville, Ky, delivered a

MEMORIAL ADDRESS ON DR EPHRAIM M'DOWELL

He said it would seem almost a work of supererogation to submit an elaborate biographical sketch of McDowell, after the very complete accounts of his life and labors which have been contributed to medical literature by the late Prof Samuel D Gross and the late Dr John D Jackson, yet, he presumed, that no one would for a moment question the good taste and wisdom of perpetuating in the volumes of Transactions of the Association, the names and deeds of eminent Southern surgeons who had done so much to lay the foundations in America, and the whole world, for the present splendid system of surgery and gynecology This galaxy of illustrious names would be incomplete without that of McDowell's, the father of ovariotomy and the pioneer of abdominal surgery, which in modern times has grown to such grand proportions

In the year 1852, twenty two years after the death of McDowell, Prof Gross, in his celebrated report on Kentucky surgery to the Kentucky State Medical Society, presented a sketch of the life of this eminent surgeon with a detailed account of his original surgical work This sketch was subsequently incorporated in Gross' *American Medical Biography*, published in 1861

After giving a sketch of his life, Dr McMurtry then referred to McDowell's first ovariotomy on Mrs Crawford and noted some points with reference to his operative technique The operation in this case was done without an anesthetic The incision was made to the left of the median line, about three inches external to the rectus muscle, and was nine inches in length After opening the peritoneum, he first tied the pedicle with a strong ligature, and then cut open the tumor and removed its contents He then divided the pedicle, it having been previously tied, and removed the sac As soon as the incision was made into the abdomen he states the intestines rushed out upon the table, and were not replaced until the operation was completed which, he adds 'occupied twenty five minutes" He then turned the patient upon the left side to allow all fluids to escape He closed the incision with interrupted sutures and brought out the ligature attached to the pedicle at the lower angle of the wound

In reporting his cases, he omits mention of the material composing the ligatures, and Dr McMurtry had been informed by a friend of McDowell, now dead, who was a great deal about McDowell's office in his boyhood, that the ligatures used were made of shoemaker's thread and waxed thoroughly before being used Adhesive strips and bandages completed the dressing and in the author's language he prescribed "a strict observation of the antiphlogistic regimen" The special features of the technique are 1, the incision was made through the muscular layer of the abdominal wall, three inches external to the rectus muscle, 2, the cyst was not evacuated until after the pedicle was tied, 3 an effort was made to cleanse the peritoneum of fluids, 4 drainage was sought as well as escape of ligatures, by bringing the ligatures out the lower angle of the incision, 5 the operation occupied only twenty five minutes, expedition being more the result, doubtless, of the want of an anesthetic than otherwise

In his report of his second case, he used this language "I laid her side open" In his third case, however, he adopted the median incision, saying in his report of this case: "I changed my place of opening to the linea alba" In all of his cases, he ligatured the pedicle before separating the adhesions or tapping the tumor In his third case, he mentions that the ligatures could not be released for five weeks, at the end of which time the cord was taken away

First Day—Afternoon Session

Dr Joseph Price of Philadelphia, read a paper on the subject of

THE INCISION IN ABDOMINAL SECTION—HOW TO CLOSE IT—POST-OPERATIVE COMPLICATIONS ABOUT IT

He said the question that most vitally concerns surgical and gynecological work was, How can the mortality be reduced? Surgical judgment and surgical fingers repeatedly determine the issue of life or death

The Incision—We have nothing from which we can ever approximately determine to what extent the length of the incision influences the mortality The statistics of comparative results would not prove satisfactory, for the reason of the entry of so many other compromising elements, adhesions, their character, extent and locality That the incision exercises a greater influence than is generally recognized or admitted, he entertained little doubt As to length, no rule of mathematical certainty could be laid down In his own experience, he finds the balance of both convenience and safety to lie with the short incision The short incision narrows the limits of hemorrhage It is safe to begin with a small incision, and where the size and character of the tumor or complications present require a larger one, it can easily be made Very much abdominal work can be done through an opening admitting only two fingers The reliance of the abdominal surgeon must be largely in educated fingers In the majority of cases, an operation can be done through a small incision without the operator or spectators seeing viscera Universally adherent, irreducible or solid tumors require a long incision for delivery and for dealing with complications that can only be dealt with through a long incision, those beneath and on the sides of tumors In the majority of cases, to so enlarge the opening as to obtain a view of the parts, we augment the risk of ventral hernia and provoke tedious convalescence

The importance of a perfect closure of the incision has only recently received that attention it deserves The effort should be to approximate as nearly as possible normal conditions, anticipating and dealing with all existing or possible complications with scrupulous minuteness and care thus guarding against those accidents which are too frequent He would not pretend to suggest uniform procedures to be carried out in all cases as each operator has his own way and does his own work best that way and it would not be possible for him to apply the methods of others safely and successfully without special training He is satisfied that the exposure and manipulation of the incision, as well as the peritoneum is harmful Incisions bathed in pus and filth and freely manipulated often refuse to unite Suppurating wounds are largely due to careless closure or to tight sutures, including too much tissue Tight suturing is too common, and has destroyed life in many feeble subjects Suppuration due to tight suturing and stitch-hole abscesses, in all sections, where they do not result fatally, prolong convalescence Cases were cited in point

Through and through suturing, including all structures, more of the central structure than skin or peritoneum, with either silkworm gut or pure silk give and continue to give the most satisfactory results Silkworm gut seems to be the favorite material at present as it possesses all the natural and essential qualities of a suture, is small, strong and non irritating—the three cardinal virtues of all good suturing material Terracing sutures has nothing to recommend it, on the other hand, Dr. Price believes it prolongs an operation' Retraction of skin and peritoneum by the introduction of silkworm sutures gives inclusion to more central structures and the least possible tension on skin and peritoneum Keith, Tait and Bantock, all use a fine straight needle, and their work has been about perfect The use of large curved cutting needles is harmful, their use primarily favors hemorrhage and secondarily stitch-hole abscesses

Dr Kelly thinks that long incisions have little or nothing to do with mortality except in an indirect way Where there are many adhesions a long incision is necessary Handling of the viscera in pre-antiseptic days increased the chances of suppuration and consequently of peritonitis and death The chances of infection he believes, are greater with a long incision Hernia comes from improper closure of the abdominal wall or the use of the drainage tube, weakening of the abdominal wall at one of its points

Dr L S McMurtry of Louisville, demonstrated his method of suturing on the board He brings peritoneum to peritoneum, muscular structure to muscular structure, fascia to fascia, skin to skin and says the least quantity of interposing material that we have between the tissues that are to be brought together the better He disagrees with Dr Kelly that the drainage tube is the cause of hernia after closing the incision

Dr R B Maury of Memphis, favored the silkworm gut suture His experience covers nearly three hundred sections, and he has simply used the through and through suture He has had almost no abscesses and the fewest possible number of herniæ, which he says can be counted on the fingers of one hand

Dr T J Crofford of Memphis, said it was considered that all hernias resulting from abdominal section were due to failure to get union between the opposing layers of transversalis fascia He uses a long curved needle instead of a straight one With it he can put in stitches in one third of the time he can with the ordinary needle He has used it in upwards of two hundred sections, and has not had a case of hernia to follow one of them He has also had the fewest number of stitch abscesses

Dr Price in closing, said there was an immense amount of theory about the matter of long and short incisions, and there was a tendency on the part of some to brush aside pre-antiseptic work Notwithstanding this, however, some of the old back numbers, or hay seeds, so called, had as good results in their day as are obtained in some of our hospitals to day He urged great caution in the terracing method of suturing

IS OPERATION DEMANDED IN ALL CASES OF APPENDICITIS? THE BEST TIME TO OPERATE

This paper was read by Dr A M Cartledge of Louisville, Ky He said that inflammatory conditions of the appendix are essentially intra-peritoneal lesions Modern surgeons have an abiding faith in the surgical maxim that whenever pus is believed to be present in tissues or organs of the body, it should be removed, hence the new pathology of a very old and frequently fatal malady inspired surgeons to attempt some radical means of relief Perfection in technique can only come from individual experience and a knowledge of the work of others

The pathology of a disease is the only true keynote to its rational treatment Probably the best classification of appendicitis is catarrhal (simple), ulcerative (from tuberculosis from foreign bodies), perforating (from ulcerative perforation from strangulation, the result of twisting) This classification deals strictly with the changes occurring in the appendix, and should be considered apart from the peritoneal and other conditions which may ensue and cause well-marked variations in the clinical course of the disease If the walls of the appendix give way in a mass of fibrous adhesions, the result of long continued irritation, the pus which forms is rather securely encapsulated and may be days weeks, even years finding an outlet In fact, as is often the case, if the bacillus coli communis predominates and a few staphylococci are present, it may remain encapsulated unless it receives a new impetus of irritation Cases were reported, illustrating this point Cases were also reported, illustrating the part played by injury as an exciting cause in appendicitis, and the belief was expressed that a chronic form of unrecognized appendicitis existed prior to such injury

We know more about the pathology of ulcerative or suppurative appendicitis than we do of the catarrhal form, because the cases not operated upon which recover are mostly called catarrhal These are cases which progress with little pain, with very little fever, 101 degrees F, as a maximum, and have a tumor which subsides These cases are the pride of the poultice and the opium practitioner Ulcerative appendicitis must be either tuberculous or traumatic, the trauma consisting of foreign bodies and enteroliths usually the latter The tuberculous would only give rise to acute symptoms as the result of cicatrization and stenosis, with distal distension, or secondary inflammation with pus organisms Either of these results favor perforation This is essentially the chronic variety, but will eventually lead to perforation, probably in the ways indicated

When physicians come to view inflammations of the vermiform appendix in their proper light, the author said the prognosis will assume a very different shade We should consider any appendix once so affected as to deserve the name of appendicitis whether from tubercle or trauma, a lastingly diseased structure, and the fancied cures are quiescent states, the results of very easily recognized conditions If we could trace our so-called first attack cases of appendicitis through subsequent ones, we would say the progress, not only as to health and comfort but as to life is bad, very bad A man has the trouble three, four or five times, apparently recovers, all counted as cures probably by different physicians Finally he dies in an attack, the death is counted but once and sometimes not then, for if, as is often the case, death results from the rupture of an unrecognized appendicial abscess, or from diffuse peritonitis after perforation, the chances are that the cause is never suspected and death is recorded as occurring from peritonitis Every case of appendicitis, not barred by surgical limitation, should be operated upon The best time, provided the symptoms are not too urgent, is after the bowels have been thoroughly moved

Dr Joseph Price agreed with the author of the paper that there was but one treatment for appendicitis, namely, removal of the appendix He considers it a murderous disease, to be classed with extra-uterine pregnancy Both demanded prompt surgical treatment when first discovered He recommends in acute cases of appendicitis without pus, removal of the appendix and freeing of the inflammatory adhesions

Dr G W Long of Richmond, opposed operation in every case of appendicitis Autopsies had shown that one-third of the human race had had at some period of their lives this disease That being true, and considering the small per cent of deaths, it naturally follows that appendicitis does not always kill, even if it is not operated on In the catarrhal form, he thinks there is no reason for operating. In the perforative form we should operate In the perforative form without adhesions we should also operate as soon as we make a diagnosis

Dr William T Briggs of Nashville, had been operating on every case of appendicitis that came into his hands where the diagnosis was clearly established, and he has had no occasion to regret it He has operated in cases where there were perforative symptoms, and in others where there were none, in some where there was, and in others where there was not, suppuration, and still others where there was, and where there was not, sloughing

Dr C Kollock of Cheraw, S C, had seen a great many cases of appendicitis He recommends saline treatment in the first attack, but if there is a recurrence he invariably operates and has never lost a case

Dr W E B Davis of Birmingham, Ala, had never operated on one of these cases without advising a secondary operation for removal of the appendix, telling the patient that the disease would recur He thought, however, there were many cases that got well without operation, but it was a difficult matter to tell in what cases we should not operate

Dr Hunter McGuire of Richmond, said he had many a time operated too late, but never in his life had he operated too soon If, after free and full purgation with salts, administered by the mouth and rectum, the symptoms are not relieved, he thinks the time for operation has come and does not hesitate to operate He had never known the mere operation in the hands of skillful surgeons to kill or add to the danger of the patient's life Appendicitis kills, and it is put down to inflammation of the bowels, peritonitis or something else

Dr Louis McLane Tiffany of Baltimore, said that the cases that require consultation should be divided into those that are going to live without bursting, and those that will rupture inside of three days, and then next to the question, of making the diagnosis, was to get the consent of the family physician The cases that are dangerous die within seventy two hours, before the family physician is able to make a diagnosis

Dr Willis F Westmoreland of Atlanta, favored early operative interference He had never been called in sufficiently early by the general practitioner to operate, consequently the patients died promptly It was necessary to educate the general practitioner to send cases to the surgeon for operation earlier

Dr W B Rogers of Memphis, had seen cases of catarrhal, ulcerative and gangrenous appendicitis, but had never been able to make a diagnosis till he got inside The symptoms of the disease were the same as those of peritonitis, localized at the site of the appendix In the cases he had operated on, he was satisfied that no medicine would have effected a cure

Dr Cunningham agreed with Dr McGuire, that an operation should be done in case medical treatment failed to afford relief

Dr Riggs of Birmingham, advocates operation in the recurrent form of the disease during the interval of attacks

Dr James A Goggins of Alexander City, Ala, had operated early on seven cases, all recovered

Second Day—Morning Session

Dr Louis McLane Tiffany of Baltimore, read a paper entitled,

INTRACRANIAL NEURECTOMY, AND REMOVAL OF THE GASSERIAN GANGLION FOR INTRACTABLE NEURALGIA, WITH REPORT OF CASES

Within the past few years, intracranial excision of portions of the fifth nerve, together with removal more or less complete of the Gasserian ganglion has been done for the cure of intractable trigeminal neuralgia The credit of first doing such an operation rests with Rose of London, after whom is to be mentioned Novaro Horsley, Andrews and others Dr Tiffany then gave an account of Hartley's method, which appears in the *Annals of Surgery* for May, 1893

It has been Dr Tiffany's fortune to operate four times for excision of intracranial portions of the fifth nerve In each case the reason for the operation was trigeminal neuralgia, not due to disease of the brain Hartley's method was followed All cases recovered from the operation and were relieved of neuralgia, it is to be hoped, permanently

The operations have been long but recovery in each instance has been rapid and complete In all cases the wounds healed at once, except in the fourth case, where the patient scratched the recent wound and infected it

It is worthy of note, that in the case of the patient upon whom operation was performed fourteen months ago, there is less anesthesia and more perverted sensation than in the other cases Sensation seems to have returned somewhat, and it is interesting to speculate as to whether sensation will ever completely return, and if so, by what route Preservation of the sense of taste after division of the second and third divisions is to be noted That the power to recognize heat and cold exists in a region rendered devoid of ordinary sensation by nerve section, is of much interest, and recalls an observation made some time since, that a conjunctiva insensitive from the local application of cocain still appreciates the difference between heat and cold

When dividing the third division of the nerve in Case 4, Dr Tiffany believes that he isolated and recognized the motor branch before dividing it Not having provided himself with a sufficiently long and fine electrode, he could not prove the accuracy of his opinion by electric stimulation, and therefore divided everything By leaving intact the motor branch, the patient would not have food collect in the cheek of the paralyzed side, and in future operations an effort should be made towards this end

THE VAGINAL ROUTE AS COMPARED WITH THE ABDOMINAL, FOR THE REMOVAL OF PELVIC VISCERA

By Dr George J Engelmann of St Louis, Mo Dr Engelmann called attention to the advantages offered by the vaginal route for many of the operations, and especially some of the more dangerous now practiced, by means of abdominal section for the removal of the uterus and appendages, and especially in suppurative cases with multiple pus centers It was vaginal hysterectomy for malignant disease of the uterus which first paved the way to the more extended use of the vaginal route for such operations He paid a fitting tribute to American surgery when he said that this, like other of the great operations of recent times, emanated from a Southern surgeon In New Orleans in 1846, Dr Dubourg fully described this operation, which he had repeatedly practiced with success since 1829, but it was again forgotten until revived within the last decade, and vaginal hysterectomy for malignant disease of the uterus is now everywhere an accepted operation, which is rendered especially safe and rapid by the *forcé* pressure method of Péan, and it was the French surgeon who extended the field to the removal of other contents of the pelvis by the vaginal route, resorting to the piecemeal removal, the *morcellement*, for the extirpation of masses too large to be delivered in their entirety through the vaginal opening The leaders in this new departure are Péan and Sigond of Paris Doyen of Reims, and Jacobs of Brussels, and followed for the present by the French school only In Germany and England these operations are practiced but little if at all, and in this country the vaginal route is limited to the removal of the uterus, vaginal hysterectomy for malignant disease and perhaps for prolapse or inversion Isolated cases of removal of prolapsed ovaries resting on the vagina, or small and conveniently situated ovarian cysts through the vaginal opening are now and then performed everywhere, but this is a very different matter The surgeons who are leading in this field vary somewhat in method and in the extent to which they apply it, but the vaginal route now serves them 1, for hysterectomies for the removal of malignantly diseased uteri, and moderately enlarged uteri, for hysterectomy by *morcellement*, for uterine tumors which do not extend above the navel, 2, for the bilateral removal of appendages with diseased uteri, 3, for the treatment of pelvic suppuration of all kinds, 4, Dr Jacobs even prefers the vaginal method for certain cases in which the appendages of one side only are to be removed Péan limits hysterectomy by morcellement to benign growths and to all cases of pelvic suppuration treated to-day by laparotomy, whilst Sigond still prefers laparotomy when operation is indicated in unilateral cases, above all in unilateral salpingo-ovaritis when non suppurative The indication given by Terrier and indorsed by Jacobs is 1, the resort to the vaginal route for cases in which suppurative pelvic peritonitis has returned, if laparotomy has already been practiced, 2, suppurative pelvic peritonitis with fixation of the uterus and multiple pus sacs, whilst laparotomy may be resorted to in enucleable non-suppurative salpingo-ovaritis

The advantages of the vaginal route are the rarity, if not absence, of shock in cases in which we would have to treat it if the abdominal method were resorted to, rapidity of operation, by reason of the *forcé* pressure method and the total absence of ligature or suture, nearness of the parts to the finger, and in aggravated pus cases guarding of the abdominal cavity from the pelvis proper or the field of operation, by the adhesions and inflammatory products which form a perfect barrier It seems the natural route for the reaching of parts below the pelvic brim There is, after operation, perfect drainage established by the forceps and the dressing per vaginam, so that there is no possible stagnation Recovery appears to be more rapid and more satisfactory than by the abdominal method, the forceps being removed in forty eight hours, the patient sitting up on the fifth or sixth day, and moving about between the tenth and fourteenth, when cicatrization is completed

TREPHINING AS A CURE FOR TRAUMATIC EPILEPSY

By Dr John T Chapman of Bessemer Ala He operated on a boy, who, some years previously had received an injury of the head by a blow fracturing the parietals Three weeks after the injury he began to have epileptic convulsions At the time Dr Chapman saw the patient the convulsions had become more frequent, and with greater force Two buttons of bone were removed at the seat of injury, there was considerable pressure from depressed bone, the membranes were hard and indurated The indurations were cut out and edges of dura brought together by continuous suture The wound healed by first intention For two months after the operation the patient continued to have convulsive seizures, but they gradually grew less until they ceased The operation was done four and a half years since The patient is now 18 years old, weighs 170 pounds, and works in a foundry He believes the doctrine that depressed fractures of the skull without symptoms require no operative interference, is in a measure responsible for many of the unfortunate sequelæ of head injuries

(*To be Continued*)

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

Augustin H Goelet, M D, President

(*Continued from page 828*)

II—ACTIVE ELECTRODES

The best material for the active electrode, when employed at the positive pole, without doubt is platinum It is everlasting, can be heated red-hot for disinfection, hundreds of times without injury, it can be bent to any desired curve and is not affected in any way by the strongest currents. Its one and only objection is its first cost Many expedients have been resorted to, to reduce the cost of the electrodes such as making the electrode of platinum in its lower half and the rest of brass, winding fine platinum wire onto a copper gum elastic or other cheap sound, using carbon aluminum, iron, tin, etc

Next to platinum comes carbon which is quite equal to platinum in cases in which it is to be applied to the surface of the body or to a large internal mucous membrane, as the interior of the uterus We would suggest that manufacturers be requested to supply carbon sounds similar to the platinum ones If that be impracticable, owing to brittleness to thread carbon beads on a stiff platinum wire so as to give a sound which will be cheap, flexible and capable of disinfection in the spirit lamp and unaffected by its flame Carbon tips screwed onto an insulated stem are valuable, when they can be made small enough to enter narrow canals like that of the uterus When the uterine canal is large enough, the carbon electrode is quite equal to platinum in its effects For intra uterine galvano cauterization, zinc has a great advantage of offering an easy means of applying a solution of chlorid of zinc When the negative pole is attached to the active electrode, gold, silver, copper, iron or steel are admissible Steel is also useful when employed for negative galvanum punctured in the form of needles The best way to connect it with the rheophore is by means of a standard binding post and screw, to which the cord of the active pole is attached For all conducting cords we would recommend the cords used by the Bell Telephone Company, as the standard size and length, as they can be obtained everywhere at very moderate cost Hard rubber is the best insulating material in general, but in emergencies collodion is very effective, shellac being inferior to either A good form of insulation is a well disinfected gum catheter When the active electrode is connected with the positive pole, and when the electrolytic and not the chemic cauterizing effects of the current are desired, both electrodes may be of clay, or carbon covered with clay The best form of construction where flexibility is required for tortuous canals is a moderately stiff gum bougie, wound for a portion of its length with annealed platinum wire, which can be used on a fresh bougie when one is worn out, but some improvement on this is desirable

The shapes and sizes for standard electrodes should be as follows for intra uterine application the shape should be that of Simpson's sound, the sizes those of the French scale When carbon or zinc beads or when olivary tips are used, or when the surface is irregular, the best method of estimating the area of surface is by plunging them in water and noting how many centimeters of water they displace When designated by numerals, as to size and surface, we would recommend that they be stamped when possible by two numbers, the first, representing the size French scale, the second, the area in centimeters of surface Thus, if one states that he employed an olivary tipped electrode, No 12-1, it would mean that it would pass through the twelve hole in the French scale and that it would displace 1 centimeter of water Or, if we said that a uterine sound 17-4, it would mean No 17 in diameter French, and that it had 4 centimeters of surface exposed

Simplicity of construction and cost of manufacture would be reduced without impairing efficiency, if a standard insulated handle with a uniform thread were adopted throughout the world Onto this one handle we could screw sets of carbon tips made by a Paris firm, platinum tips made by a Berlin firm, zinc tips made in Chicago gold tips made in London, flexible tips made in Philadelphia, and so on, the practitioner feeling certain that no matter where he purchases the tips they would fit his insulated handle As the wear of the screw on the handle would be greater than that of the hole in the tips, the handle screw should be made of steel The standard thread should be that known to manufacturers as No 2-40 American gauge The best means of cleansing is to wash all electrodes in soap and water after using, and to boil them for five minutes before using, in the case of bougies, or by passing them a few times slowly through the flame of a spirit lamp in the case of all metal electrodes

III —ACTIVE AND INACTIVE ELECTRODES

The terms, active and inactive, are the best standard ones we can employ We have been unable to find any better term to express the fact that we wish to concentrate the effect of the current at one pole and to disperse it at the other Alternative terms might be concentrated and diffusing electrode, but we prefer active and inactive as more expedient

We urgently recommend that all connections be made by means of No 6 32 binding posts, so that the screws of all manufacturers would be interchangeable Owing to the risk of plug and socket connections becoming loose and dropping out, we recommend that all connections be made by means of standard hole and pressure screws In case that our suggestion in this respect be adopted by the Association we would recommend that a circular be sent to manufacturers whose address is known, in America and Europe, urging them to adopt this standard screw thread in all connections of instruments made by them [1]

All of which is respectfully submitted

A LAPTHORN SMITH, Chairman
CHARLES R DICKSON

The Committee had its attention drawn to some new electrodes for external use, by Dr Lucy Hall-Brown These electrodes were of perforated brass plates of different sizes and shapes, designed to be covered with punk, and with brass springs on back, by means of which connection was made, the springs fitting into split tips on the ends of the conducting cords, which latter also possessed some novel points Dr W J Morton had also presented a circular, soft rubber cap to cover electrodes and prevent dripping of water also a sample of "punk" with which he covered his carbon electrodes, a cataphoric electrode with reservoir with a capacity of 1 drachm, also an intra-uterine electrode possessing several advantages

All of which is respectfully submitted

DISCUSSION

DR MASSEY—remarked that five years ago he devised a spiral platinum electrode, inclosing a second spiral, for use in tortuous canals It can be rendered aseptic by heating He did not approve of a soldered connection with the gauze, as it was very apt to break off during the application No 20 wire made into a flat coil furnished an excellent groundwork for an electrode He saw no advantage in having a standard surface for the external electrode, as this did not affect the scientific accuracy of one's work

DR MARTIN—said he was the originator of the spiral electrode, and exhibited one before the International Congress in 1887, and published a description of it in the *New York Medical Record*, and other journals

DR MASSEY—replied that his allusion was only to a spiral electrode wound about a base which could be readily rendered aseptic His electrode would be found in practice very different from the one devised by Dr Martin

DR J B GREEN, Indiana—said that in 1887, his attention was called to Martin's spiral electrode, and that he then used it in intra uterine work As an American and a Yankee, he saw no reason in adopting the French scale For instance, No 22 caliber might just as well mean twenty-two one hundredths of an inch There was nothing more disgusting to him personally than the saturated clay electrode The least objectionable is Martin's electrode, although it must be admitted that the animal membrane when moistened soon becomes fetid For the past two years he had been using an electrode made of saturated wood pulp It takes up water readily, does not dry easily, and is as cheap as rags, and so can be thrown away when used

We can not possibly fix upon a standard size for electrodes If the electrodes are close together, there is marked sensation on the part of the patient—the electric reaction is chemic reaction We can divide the current over different parts of the body with the same electro-therapeutical effect, and to the great comfort of the patient

DR DICKSON—said he had been opposed to the clay pad until the meeting last year when Dr Goelet described his modification of the Apostoli pad This he found very satisfactory

As an addendum to the report of the Committee, DR LUCY HALL BROWN read a paper on

ELECTRODES FOR EXTERNAL USE,

in which she recommended a special electrode made of perforated brass plate, with a special device for connecting it with the rheophore

The sponge electrode to be of any service must be so thoroughly wet that the slightest pressure put upon it will squeeze the water over the patient, and unless a sponge is held by pressure in close contact with the skin it is of little use, for the reason that the current will be so unevenly distributed from its surface that the using of a high current is out of the question, that is, without causing a severe burning sensation to the patient—a high current may be qualified in this case, at, say, 100 milliampères

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[1] We rely upon the assistance of the electrical experts in coming to conclusions of practical value

"Felt," although of a close texture, is really a poor absorbent, and can never be made to lie in sufficiently close contact to the skin It will curl away at every opportunity The material known as "spongio-pyline," consisting of a mixture of sponge and felt, is practically no better than the felt and for the same reasons

Absorbent cotton is not sufficiently porous, it packs to such an extent that it gets lumpy, and then becomes an uneven distributor for the current

Clay, to be serviceable, must be kept well kneaded and when thus applied as a poultice will give good results It is from an electrical standpoint, the best by far of all the electrodes thus far mentioned but, on the other hand, it is cold, unclean and troublesome to keep in condition

Briefly, my electrode consists of a piece of "amadou," or punk, first made moist and laid upon the patient, and on this, but a little' smaller than the amadou is laid an annealed piece of perforated brass having suitable device to connect with the battery

Amadou is a species of fungus—a substance which grows upon old trees in England and on the continent of Europe It will readily take up more than its weight of water, and in so doing contracts to at least half its former size When saturated with water it has a fleshy touch, and will readily conform to the irregularities of any body upon which it may be placed This substance will remain moist for a long time, and a sand bag or other pressure may be put upon it without fear of water running from it over the patient It is exceedingly porous, and when thoroughly wet forms an excellent conductor The current is evenly distributed over the whole surface covered by it, and consequently no burning spots are experienced by the patient

The metal used is a plaque, or flat piece of perforated brass, several of different shapes are herewith submitted You will notice that they are very smooth on one side, and owing to the punches of the machine in making the perforations slightly rough on the other The brass, after first being well annealed, can easily be cut with an ordinary pair of scissors to any desired shape, care being taken to follow the perforations in such manner as to leave an unbroken edge all around the plaque

The flexible conducting cord from the battery is connected to the perforated plaque through the intermediary of a short and well insulated piece of flexible conducting cord, having at each end a split tip of special design Two of these short conducting cords are herewith submitted, one complete, the other partly cut away, that you may understand its construction You will see they are some twenty inches in length and consist of four lengths of the ordinary tinsel conductor twisted together to form one conductor, and pulled through a piece of small rubber tubing which they about fill A larger size piece of tubing is then drawn over the whole and the tips attached to the ends This makes a strong, well-insulated and flexible conductor

These short cords are of value in practice, for instance, it is often found desirable, while having one pole of the battery in continuous connection internally, to have the other pole connected first over the abdomen, then across the back and again over the abdomen thus changing back and forth several times during the treatment In practice, therefore, two external electrodes of large surface are used, each having connected to it one of the intermediate cords One electrode is placed in position under the back and the other across the abdomen It is then a simple and quick matter to detach the battery cord from one and connect to the other as desired

To make the connection between the plaque and the short cord the little brass strip of the plaque is forced into the slit of the tip, thus the corrugations on the former retaining it in place and assuring a perfect connection The cord from the battery is then connected to the other end of the short cord, by pushing the pointed tip of the former into the longitudinal hole of the latter, the spring sides of the tip, as in the other case, assuring a tight and perfect connection The whole is simple and easily kept in order, each part being separate and complete in itself There are no screws to get lost and no chance for sulphites to form between the metal and moist material, the amadou not being attached to the metallic plaque, is easily kept clean and the plaques can be brightened in a moment by rubbing them with a piece of fine emery paper

(*To be continued*)

CORRESPONDENCE

An Easy Conundrum —What He Should do with It

DETROIT, MICH, Nov 25, 1893

To the Editor —In my mail, the other day, I received a blank application for membership I am already a member and have been for years What do you expect *me* to do with this blank? Yours truly, J W X

Ans—Get a new member with it, please

Pathology of Influenza

FORT MADISON, IOWA, Nov 19, 1893

To the Editor —In our JOURNAL for Nov 18, 1893, under caption, "Pathology of Influenza," I find an excerpt from the *St Petersburger Medicinische Wochenschrift*, in which a painstaking microscopist finds on postmortem, intra-fibrillar hemorrhages invariably unilateral, from which pathologic find he draws the conclusion that the lesions in influenza involve the sympathetic centers' (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, p 774, November, 1893) The observation substantiates my anatomico physiologic deduction as presented in the Iowa State Medical Association in May, 1892 See Transactions of Iowa on page 93 Permit me to inclose reprint and oblige

Very truly,
W T ECKLEY

Fiftieth Annual of Virchow's Promotion

FROM OUR SPECIAL CORRESPONDENT

BERLIN, W, Nov 6, 1893

There have been many extraordinary proceedings of medical societies in Berlin in honor of the fiftieth return of the day when Rudolf Virchow took his degree at the hands of the Faculty of Medicine in the Berlin University We will only take note of the proceedings in the Berlin Medical Society (Medizinische Gesellschaft) as this is the most prominent among the aggregations of this kind in Germany The meeting took place on the 25th of October in the new-built house of the Society, which as its name implies is devoted to the memory of Prof Langenbeck The room was fully decorated with flags, banners and emblems touching the significance of the day The rooms were so crowded with medical men in holiday attire that movement of persons was at times very difficult The meeting was opened by an address of Prof von Bergmann, who delivered into the hands of the "jubilar" a paper devised by the Society, in which Virchow is made acquainted with his election as Honor-President In his address, von Bergmann said that the uniting link and the aim of the Medical Society was the promotion of medical science In his answer, Virchow rejoined that it was right to say that promotion of medical science was the aim of the Society, but not less, advancing of the profession itself It was true, Government in some directions had well provided for the medical staff, but there remained yet much to be done until the medical order had that position in society which was due to it As to the motives for this holiday, the fiftieth return of his promotion, some days ago he had been reading his dissertation for the title of M D once more By this he had become conscious how much everybody was influenced in his method of thinking by the opinions of his times Two pupils of Virchow's, Prof Rindfleisch (who is now Virchow's successor in the Chair of Pathological Anatomy in Wurzburg) and Prof Ponfick of Breslau, (formerly assistant of Virchow) had come from afar to read papers in honor of the day Prof Rindfleisch treated a rare abnormality of the skull which he had seen, producing the specimens In this paper he recalled Virchow's researches about pathologic alterations of the bones of the skull, especially his fundamental studies on the skulls in cretinism Having ended his speech he delivered over to Virchow a letter of gratulation of the Medical Faculty of Wurzburg, in which was mentioned that, Berlin excepted, Würzburg was the only University at which Virchow had professed his science Only one of his then mates in the years 1849–1856, Prof Albert von Kollicker, is a ruddy worker yet, but in Wurzburg, the time when Virchow was living there and teaching, was well remembered In his reply, Virchow especially greeted Kollicker, who then had instructed him well The last days often had recalled to him his Wurzburg years, and he had in mind to give expression to this remembrance by a publication Prof Ponfick gave a report on several weighty observations on metastasis of bacteria By a large line of preparations of bones he showed that bacteria which had made their entrance at any peripheral point of the body remained at last in the bones, and most probably in the lower strata of the periosteum where they under certain circumstances caused pathologic actions whose connection with the first process had not been cleared up till to day Ponfick said his investigations were a consequence of the theory of metastasis as founded on Virchow's inquiries Ponfick ended the speech by delivering the gratulation of the Medical Faculty in Breslau

Among the many honors presented to Virchow on this occasion, we will yet mention his being nominated Honorary Member of the Physiological Society of Berlin

THE CHARITE HOSPITAL—In the Royal Charité Hospital in Berlin, one of the largest buildings devoted to curing the sick in Europe, there have of late been opened two new Sections for diseases of the ear, and also for diseases of the throat and nose, under the respective direction of Prof Frankmann, physician to the German Emperor, and of Prof B Frackel With these two Sections the number of clinical institutions in the Charité Hospital amounts to eighteen Each part and especially of medicine, has now its separate Section in this Hospital, serving as well for curative purposes as for the instruction of students Not only in Germany but in Europe this versatility of instruction in one house or, rather collection of buildings, is unequalled The 'Charité" was founded in the year 1727, having then six departments with 200 beds Together with the progress and specialization of medicine, step by step, the number of buildings serving even more disciples has been augmented Among others on the grounds of the "Charité" there is the house in which the famous Virchow has his rooms for dissections and microscopic researches, from where his glory and renown has been dispersed throughout the civilized world Nearly all the Sections of the Hospital are in connection with "clinics" The Hospital has now accommodations for nearly one thousand eight hundred patients The department for medical instruction has now in contemplation the rebuilding of the oldest parts of the Hospital, adapting them to all newly devised comforts for the sick, with an estimated cost of thirteen millions of marks

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Cerebrin Again

CHICAGO Nov 22, 1893

To the Editor —In your issue of August 26, you published a communication of mine on Hammond's cerebrin, in which the presence of nitroglycerin was suspected

The results of my chemical examination of that article, also of a bottle of Hammond's medullin showed how well founded was that suspicion

A few weeks later Dr Hammond made public a reply, the ntial part of which is that I could not have analyzed the tro genuine article, since I failed to find alcohol and boracic acid in it

Such a way to meet the issue was so weak, under the light of my statement of the true object of my investigation, that I was contented to let the matter rest without any further remarks

Since then I have seen a circular issued by the Columbia Chemical Co, the manufacturers of Dr Hammond's animal extracts, which says that I failed to find water, alcohol, boracic acid and animal matter in the samples examined by me

Therefore, the trade is warned that unscrupulous dealers get empty bottles of Dr Hammond's products, and fill them with some dangerous imitation, and palm them off as the real article, out of pure deviltry evidently

Let us bring back the question on its true ground I never pretended to publish a complete analysis of Dr Hammond's cerebrin and medullin, because that was unnecessary

The only question for me to solve was whether the physiologic effects of the two articles are due to some extraneous matter, namely, nitroglycerin, or to some ptomaine

A priori, there was a faint possibility that a six months, maceration of brain matter might be attended with the production of *neurin*, or neurin and *cholin*, possibly *muscarin* also

Those three alkaloids have decided and powerful physiologic properties, not entirely unlike those of nitroglycerin. The general tests for alkaloids failed to show their presence.

On the other hand, I obtained decided reaction, characteristic of nitroglycerin, or, I added, some other closely allied substance (some nitrite for instance)

Since the publication of my first note, I examined with exactly the same results, another *unbroken package* of cerebrin

The original bills seen by me, show that the three samples were sold by the Columbia Chemical Co, (New York) to Messrs Lehn and Fink (New York) who forwarded it to Messrs Gale and [illegible] [illegible]m whom I received it unopened

[illegible],

M DELAFONTAINE

BOOK NOTICES

Twenty-Fourth Annual Report of the State Board of Health of Massachusetts Boston, 1893

No health reports have ever been issued in America of a higher class than those of Massachusetts, whether we regard the matter from the standpoint of practical utility, or that of pure science The fortunate possessor of a set of these reports from the beginning has an excellent library on practical hygiene

This report is in nowise inferior to its predecessors It contains 1, the general report containing a summary account of the doings of the Board during the year, 2, a series of special reports on water supply and sewerage, 3, report on artificial ice, 4, report on food and drug inspection, 5, weekly mortality report of cities and towns, 6, reports (5) upon epidemics of typhoid fever in Massachusetts in 1892, 7, health of towns

The foregoing enumerations of the headings of the table of contents, by no means give more than a suggestion of the valuable reports contained in the volume, they must be seen and read to be appreciated

We suggest to our brethren in those States where there is yet no Board of Health, that the proper distribution of this report to influential members of their Legislature, would be the most effective object lesson they could use

The Diseases of Childhood (Medical) By H Bryan Donkin M A, M D, Oxon, F R C P, East London Hospital for Children, at Shadwell, Physician and Joint Lecturer on Medicine and Clinical Medicine, Westminster Hospital Octavo, 440 pages Muslin, price $4 00 New York Wm Wood & Co 1893

"This book," says the author in his preface, "is based to a great extent on the records and recollections of nearly twenty years' experience at the East London Hospital for Children, and includes the substance of some lectures given at Westminster Hospital, and of a few contributions to the Westminster Hospital Reports"

The work is divided into six sections, of which Section I, containing fourteen chapters, is devoted to "Disorders of the Alimentary Tract and of the Abdomen," Section II, containing five chapters, to "General Diseases," Section III, "Acute Febrile Diseases," contains nine chapters and an appendix, the latter being an abstract of the conclusions given in the report of a committee appointed by the Clinical Society of London, to investigate the periods of incubation, and contagiousness of certain infectious diseases Section IV contains nine chapters on "Disorders of the Nervous System," Section V has eight chapters on "Diseases of the Respiratory System," and the concluding Section, VI, is given to the consideration in four chapters of "Disorders of the Heart and Circulation" The appendix to Section III will be of especial interest to health officers, as there is given, for smallpox, chickenpox, measles, rubeola (Rotheln), scarlet fever, influenza, diphtheria, enteric fever and mumps, the incubation period, the infectious period, and the time of quarantine for each The book is well printed on high class paper but contains no illustrations It is well worthy a place in the library

Surgery, A Practical Treatise with Special Reference to Treatment By C W Mansell Moullin, M A, M D, Oxon F R C S, Surgeon and Lecturer on Physiology to the London Hospital, etc Assisted by various writers on special subjects, with 600 illustrations, many of which are printed in colors, about two hundred having been made from special drawings Second American Edition, Revised and Edited by John B Hamilton, M D, LL D, Professor of the Principles of Surgery and Clinical Surgery, Rush Medical College, Chicago, Professor of Surgery Chicago Polichnic, Surgeon Formerly Supervising Surgeon General U S Marine Hospital Service, Surgeon to Presbyterian Hospital, Consulting Surgeon to St Joseph's Hospital and Central Free Dispensary, Chicago, Secretary General of the Ninth International Medical Congress, etc, etc 8vo, cl, pp 1,238 Philadelphia P Blakiston, Son & Co Chicago The W T Keener Co 1893

From the editor's preface we extract the following

"Its wide scope, its clear expression, and its excellent illustrations made it (the first edition) a favorite, and these characteristics have been preserved in the American edition now offered The work has undergone thorough revision wherever necessary, and many new illustrations from the most recent foreign and domestic monographs have been added, and such changes in the text have been made as recent changes in theory and practice required Some rearrangement has been made of the text, and a brief chapter on the outlines of military surgery has been added To make room for the new matter and new illustrations, without materially increasing the bulk of the book, certain portions of the former chapters on diseases of the skin, diseases of the eye, diseases of the ear and larynx as were not strictly surgical, have been omitted Among other additions, the chapter on amputations has been enlarged by the addition of a number of new illustrations, and surgical bacteriology has been newly illustrated by colored engravings from recent monographs"

This edition, we notice, retains the same frontispiece as the former one, except that Prof Senn's face has been substituted for the somewhat insipid-looking face of the original The other parts of the picture, which by the way do not represent the operation, might as well have been omitted The other illustrations introduced for the first time are mainly from the recent "Traité de Chirurgie" by Duplay and Reclus, the most exhaustive encyclopedia of surgery yet published, and the beautiful illustrations from Esmarch's "Chirurgische Technik," and many colored illustrations from Woodhead, and in military surgery from the official manuals and instructions

A comparison with other works on surgery for the year will show that the book has been brought fully down to date, as examples we may mention a reference to Senn's bone "thimble" or "ring" for gunshot fracture, p 1212, and the same author's new hip-joint amputation, p 1195, Watson's prostatic cannula, p 1080

NECROLOGY

Dr William Winchester of Elgin, Ill, November 20

Dr James Campbell of Detroit, Mich, November 19

Dr Alfred North of Waterbury Conn, November 18

Dr E Lane Schofield of Chambersburgh, Pa, November 19

Dr A J Hiserote, one of the pioneers of Hardin County, Iowa, died November 1

MISCELLANY

Doctor's Drummers Must Wear Tags—We learn from the *Hot Springs Medical Journal* that the City Council of that enterprising resort has enacted that hereafter the drummers who solicit patronage for the local physicians must be duly labeled according to law, and wear a numbered tag

Office Thief Caught—Dr J W Middleton of Steelton, Pa, had his office robbed, and valuable surgical instruments stolen November 13 The thief was caught next day at Middleton, Pa, having attempted to sell the instruments to some of the physicians of that place The first to whom the instruments were offered, suspected that they were stolen and the telephone did the rest

New Hospitals—The Catholics have leased a building at Des Moines, Iowa, for the purpose of establishing a Mercy Hospital The institution will be in charge of the Sisters of Mercy

A new hospital at Clifton, Staten Island, is projected by certain society people of that place The use of a building at Belair Road and Tompkins Avenue has been donated by Mrs Nathaniel Marsh for two years The new hospital will be open to receive patients December 18

Locked in Jail by Mistake—A physician of Cassopolis, Mich, was called to attend a sick prisoner in a jail The turnkey who let the Doctor in is a little absent-minded, and he forgot all about the circumstance The Doctor whose feelings may be easily imagined, was locked up with his sick prisoner for several hours before the turnkey happened to think about him

Alumni will Smoke Four Times a Year—The Alumni Association of the Medical Department of the University of Pennsylvania, held the first of a series of unique entertainments called a 'Musical Smoke" November 18, at the Colonnade Hotel, Philadelphia The University Glee and Banjo Club furnished the music There were about two hundred and fifty members present

Smallpox —The number of cases of smallpox in the country at the present time is considerable No less than six States have reported cases lately We recently published the action of the State Board of Health of Pennsylvania in relation to Reading, and the disease is manifestly increasing in Chicago, where the Health Officer announced that there were twenty one cases in the smallpox hospital on November 23

Quarantine Raised —Dr Brunner, the Health Officer of Savannah, raised the quarantine against Southern points, except Brunswick and Jesup, November 16 A slight frost occurred in Savannah on that date, and also at Brunswick, where the advent of the cold wave was hailed with great rejoicing November 19, upon notification from Surgeon H R Carter of the Marine Hospital Service, that danger had passed, Dr Brunner raised the quarantine against Jesup

List of Foreign Countries and Places in which cholera has been officially reported since June 1, 1893 From Abstract of Sanitary Reports Those in italics have been reported during the week ended Nov 9, 1893

Africa —Alexandria, at lazaretto, Mogador, quarantine station, Saint Louis, Richard Tull, Dagana, N'Daen, Dalmath, Podor, Malam, and Goree-Dakar Senegal

Arabia —Djeddah, Mecca, Medina, Mina, also along the Hejaz

Austria and Austria-Hungary —Beregh, Bohorodezany, Bralia (Roumania), Dees Doboka, Hattyen-Kerec, Kolomea, Nadworna, Sanok, Stanislaw, Szaholes, Szatmar, Tisza, Vienna, also in *Galicia* and Bukowina, Buda-Pesth, Kis Varda, Doreebad, Szabolcs (county of), Marmoros (county), Jasz-Nagy-Kun Szolnok

Belgium —*Antwerp, city and province*, Brussels

Brazil —Rio de Janeiro,[1] San Paulo

France —Alais, Aubenas, Avignon, Bordeau, *Brest*, Cadiè, Camaret, Cette, Chautenay les Nantes, Cuers, Hyèrès, Larcat, La Seyne, La Vallette, Lambezellac Limoges, Lorient district, Lyons, Marseilles, Mines, Mirepoix, Montpellier, Nantes, Pamiers, Pierre Benité, Privas Salon, Sorgues, Toulon Toulouse, Vannes district, Department of Basses Alpes

Germany —Barmen, Berlin, Cologne, *Danzig* Donaueschingen, Duisburg, Geestemunde, Hamburg, Homberg, (district of Moers), *Magdeburg* Neuss, Neuwied, *Neustadt*, Papiermuhle, Solingen *Stettin*, St Goars, St Goarshausen

Great Britain —*Hull*, Grimsby, Liverpool, London, Newcastle, Rotherham

India —*Calcutta*

Italy —Aquila (province of), Anna Capri, Alessandria (province of), Barra, Bubbio, Caivano, Campalasso, Capri (island of), Castellamare Canerta, Cueno (province of), Feddio, Fresonaro, Furori Grotta, Gragnano Gaeta, Genoa, *Leghorn*, Maddaloni, Montegioco, Naples,[2] Origlio, Pisa, *Palermo* Pavia, Piedmont, Roccanerano, Rome, Rounigliano, Rouaverano, San Guliano Vecchio, San Salvatore, Sorrento, Sulmona, Torre Garfali, Torre Annunziata, Trapani

Japan —Hiogo, Osaka

Netherlands —Ameide, *Amsterdam*, Avereest, Delft, Deventer, Dubbledam, Durgerdam, Elden, Giesendam, Hansweert, Kralingen, Koog a d Zaan, Leerdam Molenaarsgraaf, Nieuwe-Wetering Oudshoorn a d Rhijn, Ouwerschie, Puttershock, Renkum, *Rotterdam*, Rumpt, Rozendaal, Streefkerk, Ter Neusen, The Hague, Utrecht, Wonbrugge, Werkendam, Ysselmonde Zuilichem, Zwijndregt Zaandam

Russia —Governments of Astrakhan, Baku, Bessarabia, *Charchoff, Cherson district, Don district*, Elissavetpol, Ekaterinoslav, Erivan, Grodno, Kalish, Kaluga, *Kazan*, Kharkoff, Kieff, *Koutais, Kostroma, Kovno, Kuban, Kursk*, Kutaisk, *Livonia, Lublinsk*, Lomza, *Minsk, Moscow*, Movieff, Nicolaieff, *Nijni-Novgorod*, Novocherkask, Orel, *Olonetz*, Orenberg, *Orloff*, Perm, *Penza Petersburg*, Plozk, Podólia Podolsk, *Plotava*, Radom, Redout Kale, Riazan, Saratoff Samara, *Sedletz*, Sebastopol, *Simbirsk, Smolensk Stavropol, Tamboff*, Taurida, Tersk, Tchernigoff, Terscheu district, Tiflis, Tobolsk, Tomsk, *Tula, Tver*, Ufa, Vilna, Viatka, Vladimer, Volinsk, Volhymnia, Voronesh, Warsaw, *Yaroslaff*, cities of Baku Batoum, *Cronstadt*, Ekaterinoslav, Helsingfors, Kertch Kieff, *Moscow*, Nijni Novgorod, Poti, Rostoff, Riga, *St Petersburg*, Sebastopol, Tiflis, *Warsaw*

Servia —Belgrada

Spain —Abando, Algorta, Amorevieta, *Arboleda, Arrigarriaga, Baracaldo*, Basauri, *Begoña, Berango, Bilbao*, Catalonia, *Campillo, Deusto*, Echavarria, *Erandio, Gallarta*, Galdames, *Guenes, Labarge, La Concha, La Franco Belga*, Las Arenas, Les Carreras, Lejona, *Matamoras*, Musques, Legueitio, *Orconera, Ortuella*, Parcocha, *Portugalete, Pucheta*, San Salvador del Valle, Santurce, *Sestao*, Turre, Urioste, Ursuell, Vedia, Zalle

Sweden —Umea

Turkey —Aboulhassib, Abovdjeruil, Abrufassié, Avássum, *Bagdad*, Bassorah, Constantinople, Chatra Amara, Djilila, Guèrmah, Hai, Hassan-Hayoun, Hit, Aamissieh, Kut, Menasin, Mohammerah, Mountefik, Nazrieh, Samara, Shouk el-Sheouk, Smyrna, Tau, Zolen, Zubeir

New Subscribers —Like other medical journals, the Journal of the American Medical Association is in the field for new subscribers It is by no means intended that the needs of non-members shall go unrecognized by the Journal, and by the spreading before the Journal's readers of the weekly budget of information from all quarters, the Journal has become truly a medical newspaper, in which every item of professional interest worthy of record is noted while still fresh, and in this respect the Journal, while managed primarily for the benefit and pleasure of its owners the American Medical Association, the Association in founding the Journal, intended it for the instruction and pleasure of medical men everywhere, whether affiliated or not In this way the Journal has, and needs subscribers, and in their interest it only asks that a fair comparison be made with other weekly medical journals, and it is sure that such comparison can only result favorably for the Journal of the Association

New subscribers sending in their subscriptions now, will have the remaining numbers for 1893 sent free

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from November 18 1893 to November 24 1893

First Lieut Madison M Brewer, Asst Surgeon U S A is granted leave of absence for one month on surgeon's certificate of disability, with permission to go beyond the limits of the Department

Major Curtis E Munn Surgeon U S A, leave of absence granted is extended two months

Marine Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the four weeks ended November 18 1893

Surgeon George Purviance, to report at Bureau for temporary duty, Nov 7 1893 To inspect Reedy Island Quarantine Nov 14 1893

Surgeon H R Carter to proceed to Jessup, Ga, for temporary duty, Nov 10, 1893

P A Surgeon C E Banks, to rejoin station, Portland Me Nov 3 1893

P A Surgeon S D Brooks to inspect Service at Ashtabula Ohio and then to rejoin station, Cleveland, Ohio Nov 15 1893

P A Surgeon W P McIntosh, granted leave of absence for twenty three days Nov 17 1893

P A Surgeon G M Magruder granted leave of absence for thirty days, Nov 1, 1893 To proceed to New Orleans for duty, Nov 15 1893

P A Surgeon H T Goodwin, leave of absence extended thirty days, Oct 24 1893

P A Surgeon J O Cobb, leave of absence extended twenty days Nov 14 1893

P A Surgeon G M Guiteras, granted leave of absence for thirty days, Nov 14 1893

P A Surgeon J C Perry, to rejoin station, Vineyard Haven, Mass, Nov 3, 1893

Asst Surgeon W J S Stewart to proceed to Reedy Island and Delaware Breakwater Quarantine Stations for temporary duty

Asst Surgeon Edgar Strayer, to rejoin station, Boston, Mass Nov 8, 1893

LETTERS RECEIVED

(A) Atkinson, Wm B, Philadelphia Aschman G A, Wheeling, W Va Antikamnia Co St Louis Mo **(B)** Brick, P L Le Mars Iowa Bates & Morse New York City Baldwin J F, Columbus Ohio, **(C)** Cleaves M A, New York **(D)** Davis, W B, St Joseph Mo **(E)** Engleston, J B, Seattle Wash **(F)** Frambes, L S Philadelphia Pa, **(G)** Galvano Faradic Battery Co New York N Y Griffith W H, New York N Y **(H)** *Hayes R H Union Springs, Ala* Holmes, Oliver Wendell Boston Mass **(J)** Jorden, H C, Lincoln, Neb, **(K)** Kutnewsky J K, Redfield S Dak Kern, W B, Hastings, Neb **(L)** Lentz Charles & Son Philadelphia Pa Lasher G W Los Angeles, Cal **(M)** Maltine Mfg Co New York N Y McGahan, C F, Aiken S C Murrell T E St Louis Mo McArthur Hypophosphite Co, Ansonia, Conn **(P)** Porter, P B, New York City **(R)** Rosenberger, John L, Chicago Rogers S F, Troy N Y Robinson, Fred Byron, Chicago **(S)** Lee, E J New York, N Y Smith F T Chattanooga Tenn Solis Cohen S Philadelphia Pa Souchon, Edmond, New Orleans, Starr, F W G Toronto Canada **(T)** Tilton, H R, Ft Omaha Neb Travis E M Eagle Grove Iowa The Sanitarium Battle Creek Mich **(W)** Waxham, Frank E, Denver, Col **(V)** Valentine, Mary F, Philadelphia, Pa

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[1] Officially denied

[2] In the province of Naples the following towns are reported Cassino Chinetela Gragnano, Nocera, Pagana, Scafati

The Journal of the
American Medical Association

Vol XXI CHICAGO, DECEMBER 9, 1893 No 24

ORIGINAL ARTICLES

PATHOGENESIS OF BRONCHITIS, IN INFANTS AND CHILDREN

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY *W S CHRISTOPHER*, *M D*

PROFESSOR OF DISEASES OF CHILDREN, CHICAGO POLICLINIC AND COLLEGE OF PHYSICIANS AND SURGEONS, CHICAGO

The doctrine that bronchitis is the result of exposure to cold and moisture, is so generally accepted, that it is rather uncommon to lay stress upon the other factors which lead to it And yet a consideration of the subject leads to the belief that these other factors are perhaps the more important and the more frequent causes

Your attention is therefore invited to a general consideration of the etiologic factors leading to bronchitis in infants and childhood

Many of the exanthemata have bronchitis as a concurrent symptom Especially is this true of measles and rotheln Influenza and whooping cough must also be included in the list of acute infectious diseases which present this condition It is customary to speak of the bronchitis accompanying these diseases as a specific bronchitis The qualifying title is very proper, but the bronchitis does not differ in any way from the same condition induced by other causes Hamilton has shown that the morbid anatomy of acute bronchitis is always the same, whatever its cause

It will probably be admitted without question, *that bronchitis occurring in an acute infectious disease is but* one of the symptoms of that disease, and is produced by the same poison which is producing *the other* symptoms Whatever be the poison, its ultimate action must be a chemic one, so that it is possible to formulate the doctrine that *in certain infectious* diseases, a chemic poison, acting in all *probability* through the medium of the central nervous system, is capable of producing the condition, bronchitis

In this connection, it is well to refer to a case reported by Hamilton in his well-known work on the "Pathology of Bronchitis," etc He *noticed* in an otherwise healthy *man*, dead of opium poisoning, a condition of bronchitis, which he concludes was produced by the opium poisoning itself This seemed rather anomalous to Hamilton, but with the light of modern pathology, it is not surprising at all to find a purely chemic substance leading to the production of this symptom

Besides the *diseases already* mentioned, typhoid fever must be referred to *as a cause of* bronchitis This cause is particularly active in infants and young children, in whom the other symptoms of typhoid are often, indeed usually, but *poorly marked*, while the bronchial symptoms are exaggerated It is not an uncommon experience for me to have a child brought for a "cold" so-called, and to find on examination, besides the bronchitis, an eruption of rose-colored spots, an enlarged spleen, an elevated temperature, and the typical tongue of typhoid of infants and young children, that is to say, a tongue coated in the center of each lateral half, with a whitish or yellowish fur, and having *red edges and red tip*, the redness often extending up the center of the tongue in a wedge shaped patch These conditions justify the diagnosis of typhoid fever *I am perfectly certain* that many cases of typhoid fever in infants and young children are overlooked, *and simply the diagnosis* of bronchitis *made from the symptom which* happens to be *most prominent*

There is another source of poisoning which frequently leads to the development of *bronchitis, particularly in infants*, and that *is the presence of putrid feces in the gastro-intestinal tract* Some years ago, Sevestre of Paris, called *attention to a class of* cases of broncho *pneumonia, accompanied* by fetid diarrhea He believed that *the pneumonia was secondary to an infection, originating* in the bowel contents Quite *recently these views* have received a *striking confirmation at the hands* of his pupil, Le Sage, who in a number of these cases found after death, the bacillus coli communis in the pneumonic tissue It is pretty well established that this micro-organism, innocent enough so long as it remains in its normal habitat, the bowel, acquires virulent properties when it migrates, and that when it migrates it is capable of producing quite a wide range of pathologic conditions Two other of Sevestre's pupils, Gaston and Renard, about a year ago re-investigated the subject, but were not able to establish Le Sage's *observations* altogether In some cases they found the bacillus coli communis, and in others they found the pneumococcus, or another encapsulated bacillus, or a *streptococcus At times*, several of these in one case

These observations show quite conclusively that the bowel *may be the starting* point for an infection which leads to the development of broncho-pneumonia Exact researches have not been *made* in this direction with *reference to* bronchitis, but it is far from uncommon to find severe bronchitis accompanied by a fetid diarrhea, and to find that emptying the bowel is followed by a marked improvement in the bronchitis There is much reason to believe that, in infants particularly, the bowel is often the source of a poison which *when* absorbed produces bronchitis

Rickets and other forms of *innutrition* in infants predispose very strongly to the development of bronchitis And this is true, *even when the* innutrition does not present any very striking or obvious evidences of its presence *Rickets*, even in its most incipient stages, often leads to *the* occurrence of bronchitis. For this reason, it is particularly desirable that the earliest manifestations of rickets should be observed. A child whose food has been for a considerable time deficient in fat or proteids, and who is restless at night, and desires to remain uncovered, and who sweats profusely about the head, has rickets. Particularly is this true if, in addition, there is delayed dentition, and laryngismus stridulus, or some other neurosis. Bronchitis occurring in such a subject, demands treatment directed to the general malnutrition rather than to the local condition. It is often said that dentition causes bronchitis, but so far as my own observation goes, dentition seems active as a cause of bronchitis, only in infants whose nutrition is below par.

Every attack of acute bronchitis leads to some enlargement of the bronchial glands. Repeated or prolonged attacks often cause a very considerable hypertrophy of these organs, particularly in those children who are predisposed to glandular enlargements, the so called scrofulous. Broncho-adenitis once established becomes a very potent factor in the causation of subsequent attacks of bronchitis. Bronchitis occurring several times during a winter usually means that the child is the subject of enlarged bronchial glands. There is probably no other one factor in the pathology of bronchitis more important than this of broncho adenitis. Often these enlarged lymphatics become the seat of tuberculosis, which fortunately only rarely terminates in pulmonary phthisis. Not infrequently, however, these glands remain enlarged, and resist purely medical treatment quite strongly, and require for their complete cure a removal to the seashore. Such cases are not infrequently mistaken for pulmonary tuberculosis.

Chronic bronchitis, which is rather uncommon in the child, acts in much the same way as broncho-adenitis, as a cause for new attacks of acute bronchitis.

What is the influence of cold and dampness in the causation of bronchitis? That they have some influence can hardly be doubted, because of the relatively large number of cases of bronchitis which occur in the cold and wet seasons. But that they have the over-weening importance so commonly ascribed to them, is more than doubtful. That they do not always produce bronchitis indicates that some other factor is necessary to complete their operation, and this other factor is probably to be found in broncho-adenitis, or some form of malnutrition.

Other causes of bronchitis, such as inhaled irritants, obstructive heart lesions, Bright's disease, etc., we will not discuss.

The following conclusions are offered:

1. Bronchitis arises from a wide variety of causes.
2. The great variety of causes giving rise to this condition indicates that it is probably always secondary and never primary, and should be considered as a symptom, rather than a disease.
3. The principal causes of bronchitis in infants and children are the poisons of the acute infectious fevers, intestinal poisoning or infection, malnutrition, and broncho-adenitis.
4. The diagnosis of bronchitis should include a diagnosis of the causative factors so far as possible.
5. The treatment of bronchitis should include not only attention to the local conditions, but also the amelioration or removal of the causative factors.

THE PATHOLOGY AND SYMPTOMATOLOGY OF ACUTE BRONCHITIS AND BRONCHO-PNEUMONIA

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY C. L. DODGE, M.D.
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ACUTE BRONCHITIS

Pathology.—The late Dr. Flint sums up the pathology in four lines. Although brief it covers the ground, and I can not do better than reproduce it: "Acute ordinary bronchitis is an inflammation affecting a mucous structure, leading to a secretion of mucus and the production of muco-pus in greater or less abundance. Resolution takes place in this situation without the occurrence of ulcerations. It belongs among the asymmetrical diseases."

Symptoms.—The symptoms of bronchitis differ much in degree, from a slight cough and indisposition barely noticeable, to the severe attacks denominated capillary bronchitis, from which few ever recover.

In young babies and children under five, the disease usually commences with coryza, or in common parlance, "a cold in the head." This is not invariably the rule, however, for we sometimes notice abrupt seizures similar to attacks of pneumonia or croup. In addition to the usual symptoms of coryza, such as wheezing, defluxion from the nostrils, etc., there is a dry, harsh paroxysmal cough sufficient to prevent the child from sleeping in many cases. The respiration is somewhat accelerated, and nursing babies are made very cross and fretful when attempting to nurse, from the inability to breathe readily through the nose. They are obliged to let go of the nipple from time to time, to take a breath, and then resume their meal. The amount of fever in these mild cases is slight; the temperature perhaps will not rise above 99 degrees. The pulse is more affected, and from the increased frequency of respiration and the nervousness and excitement consequent upon the disorder the pulse may run up to 120 or 130. In the more severe cases the child is plainly sick. It wants to be rocked or carried, continually cries and worries at the approach of strangers and refuses to play or be amused in any way. The fever in these cases is considerable, but must not be estimated by the rapidity of the pulse, which is usually 160, and often as high as 200 to the minute. The temperature, which alone is to be relied on in these cases as to the severity of the febrile process, usually reaches 103 degrees F., in simple uncomplicated bronchitis. A fair average would be 101 degrees to 102 degrees.

The skin is dry, hot, and burning to the touch, and the cheeks are flushed. The respiration is very rapid. The cough is dry, harsh and persistent, and after a time somewhat painful. The expectoration—which in babies is a misnomer—is scanty and consists of a little viscid mucus which is swallowed the moment it is coughed up. The tightness persists for some days unless appropriate treatment be instituted, and is a source of much annoyance and suffering. Mild attacks may terminate in a week, but when at all severe the disease is apt to last longer, that is, the principal symptom, which is the cough.

In older children we observe some deviation from the description given above. A child of six or eight is able to expectorate and to describe his feelings. There is no expectoration at first, but after a day or two, especially if treatment has been instituted early, the cough loosens and the phlegm is raised with little effort The child complains at first of tightness and constriction across the chest, with a scraping sensation beneath the sternum on coughing There is also more or less laryngitis present, with pharyngitis of a mild grade in many cases This gives rise to a sense of tickling in the throat which provokes a desire to cough almost constantly where the local irritation is pronounced

Many cases of bronchitis in children of this age begin as laryngitis and extend down by continuity of structure The fever is not so high with older children, nor is the respiration so rapid After the cough has lasted several days, most children who are old enough to talk will tell us that they have pain in the stomach—the result of traction on the diaphragm from the persistent coughing

BRONCHO-PNEUMONIA

Pathology —This disease is known by many names By some writers it is termed capillary bronchitis, a most unfortunate designation By others it is called lobular pneumonia or catarrhal pneumonia The result has been to utterly *confuse the minds* of students, and many practitioners have only a vague conception of the actual pathologic condition

Catarrhal pneumonia is not like croupous pneumonia, a distinct and independent disease clinically, but in the great majority of cases it is a secondary phenomenon, which may develop in the course of acute and chronic diseases of various kinds It almost always follows bronchitis The same process which produces catarrh of the bronchial mucous membrane, in its further course invades the bronchioles and the alveoli, and here leads to catarrhal pneumonia (Strumpell) Measles, in my opinion, has been given undue prominence as a factor in the causation of this disease Bronchitis from whatever cause, measles, whooping cough, or the simple variety, is the starting point in most cases

The ball-valve theory, where a plug of viscid mucus acts as the valve, has been accepted by many writers to explain the occurrence of collapse or atelectasis Others believe that pus is sucked into the alveoli by the labored respiration Dr Morrill[1] thus tersely sums up the matter there is inflammation of the bronchial mucous membrane, which involves the walls of the smaller tubes and the surrounding connective tissue by direct extension, and the bronchioles, alveolar passages and air cells, either by direct extension or by the migration of inflammatory material Moreover, this material may occasion collapse of groups of vesicles, an accident in the causation of which feeble respiratory power and narrowing of the lumen of the smaller tubes materially assist

Symptoms —As has been already mentioned, broncho-pneumonia almost always develops secondarily in the course of other diseases Hence it happens that its symptoms are often subordinate to other prominent symptoms of the disease When broncho-pneumonia follows an attack of measles, it begins with the symptoms of an acute bronchitis The inflammation advances rapidly and involves the pulmonary tissues On the other hand, when the disease supervenes in cases of whooping cough, its advent is slow and insidious, and is usually accompanied by a decrease of the paroxysms When it occurs as a distinct disease by itself, however, the length of time during which it may be preceded by acute bronchitis, without any rational or physical signs of consolidation, is extremely variable Morrill gives the extremes as five and twenty-eight days

The extension of the disease to the lung tissue proper, manifests itself by increase of fever, dyspnea, and a change in the character of the cough, which becomes short, painful, hacking, and as a rule much more frequent The child is no longer able to rid its lungs of the steadily accumulating secretions The respiration increases in frequency and the face assumes an anxious, frightened expression It makes no attempt to talk as a rule, instinctively realizing that it has no breath to spare for that purpose Young children do not expectorate, but during a violent coughing spell viscid and frothy mucus frequently escapes from the mouth and then is seen to differ from the typical sputa of lobar pneumonia As fresh areas of lung become involved, paroxysms of dyspnea occur and all the symptoms increase in severity When extensive collapse takes place, the dyspnea increases, the temperature falls, the cough ceases, and the child rapidly sinks into a comatose condition At the same time the face becomes livid, the skin cold and clammy and death usually follows in a few hours This disease has no regular march of invasion Its forces scatter and attack different areas of the lungs

The morbid process is complex, and absorption of the products of inflammation, as a rule, is so slow that it is extremely difficult to define the stage of resolution (Morrill) The pulse is extremely rapid from the beginning of the attack, and continues so for some time after the decline of the temperature This is usually explained as being due to the weakness of the patient As is well known, the pulse varies greatly in sick children, and writers differ as to what constitutes an average rate for this disease As a rule, I think they place it too low There are few cases of true broncho pneumonia in young children where it will be less than 150, and more where it will be nearer 200 Morrill says that the latter number (200) has been observed more than once in cases terminating favorably I have recently had an opportunity to corroborate the truth of this statement The respiration also varies greatly, and what has just been said with regard to the pulse rate applies with equal or even greater force to the breathing Excitement from any cause, however slight, will immediately affect the rate and rhythm When the disease is fully established, the respiration becomes very rapid, often reaching 80 per minute, and I have seen it even higher Expiration is often jerky or grunting Sometimes the child makes a moaning sound Morrill tells us that the breathing of young children in broncho pneumonia is no longer abdominal, the ribs rise and fall as in adults Osler[2] states that death occurs from heart paralysis, but I believe with Morrill that "death in broncho-pneumonia results more frequently from respiratory than from heart failure " The temperature varies with the other symptoms It will average 104 degrees to 105 degrees F , during the acute stage of severe cases It has been known to reach 107 degrees F , and yet recovery follow A remission of three or four degrees in the morning is usually observed, but the fever is very irregular and often the morning temperature will be higher than the evening, but this does not continue for any length of time There is no regular ratio between the pulse, the temperature and the respiration

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[1] Keating s Cyclopedia

[2] Practice of Medicine

According to Morrill, a favorable result in broncho-pneumonia is never immediately preceded by an abrupt decline in the temperature This phenomenon when present means collapse, and is of the gravest import The tongue is usually coated more or less in the early stage but is not invariably so, it sometimes looks red and raw In the later stages, the tongue becomes dry and sore Complete loss of appetite is the rule from the beginning of the acute symptoms Thirst is present in most cases but some times is less than might be expected from the severity of the fever On auscultation during the early stages of broncho-pneumonia, râles of all sorts and sizes may be heard, but at a later period there are persistent sub crepitant râles in one or more spots The course of an extensive broncho pneumonia is usually quite protracted Even in favorable cases the disease rarely lasts less than two or three weeks, and often much longer

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SOME PHASES OF BRONCHO-PNEUMONIA IN CHILDREN

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

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In France, England and the United States of America, broncho-pneumonia is usually reported in mortality tables as catarrhal pneumonia, capillary bronchitis or congestion of the lungs, and in a study of statistics this should be borne in mind and these terms included under the designation, broncho pneumonia, at least until greater harmony in terminology prevails It may sometimes be mistaken for acute bronchitis or pneumonia That these mistakes are made is evidence of two things 1, a possible carelessness in diagnosis, and 2, some confusion as to the precise pathologic condition termed broncho-pneumonia It is certainly confusing to read some of the definitions given of this disease If one is to understand the obstruction of a small bronchial tube and the resulting inflammation about it to be the special condition in broncho-pneumonia, then the autopsy would usually have to determine the diagnosis If an inflammation of the connective tissue of the walls of the minute bronchioles is the chief element in broncho pneumonia, the diagnosis will always be difficult If broncho pneumonia is a disease involving inflammation of both the bronchial tubes and lung tissue, a diagnosis can almost always readily be made It is in this sense that I use the term A broncho pneumonia may originate in a simple catarrhal inflammation of the mucous membrane lining the bronchial tubes, this morbid condition may extend to the deeper tissues, and eventually involve the lung tissue

It often happens that the thickening and induration of the walls of the minute bronchial tubes close the lumen of the passages and a portion of lung is destroyed, the vessels to the part may become obstructed and degeneration result

The catarrhal origin and the involvement of the lung tissue are more easily discerned than the obstruction of vessels or the degeneration of a small area of lung substance If, however, there are a number of air vesicles occluded, and an appreciable area of lung substance involved, a diagnosis may easily be made

I desire in this place to call especial attention to a class of cases which may be followed by serious results, but for which the physician is usually not consulted at the proper time I refer to common colds It may not infrequently happen that an acute catarrhal cold involving the nose and throat persists, and the inflammation extends into the bronchi and thence to the air vesicles and lungs, and an acute broncho pneumonia is excited before the patient considers it necessary to call a physician This class of cases will be met with most frequently in children, but may often be encountered among adults likewise Such a cold frequently subsides without the interference of medication, and that common fact leads people to be careless in regard to such ailments This undoubtedly is one of the casual factors of the high mortality of cases which come under the observation of physicians Even those cases which do not die at once, frequently are the subject of lesions which eventuate fatally To illustrate my statement I will refer briefly to two cases occurring in children and two in adults

Case 1—Robert D, 6 years old, had suffered with two or three hard colds during the fall and winter January 30 I was called to see him I was told that he had been sick for a week, and that I was called because his cold did not yield to the domestic remedies which had previously been sufficient The tonsils were swollen and red, with small deposits of yellowish white exudate Bronchitis was marked and the *inflammation* had already involved the air vesicles and lung tissue The respirations were somewhat labored Bronchial râles were abundant Respiratory sounds subdued and interrupted in both lungs Percussion revealed slight dullness over left lung, right slightly, if at all modified Pulse 125, temperature 103 5 degrees Next day patient was slightly better and improved until the sixth of February when he was dismissed cured The sputum was not seen in this case, but in the following it was stained with blood

Case 2—Zadie S, 8 years old, had spent the winter in the South with her parents Upon returning home she contracted a severe cold Had catarrh of the nose and throat and a cough Medicine was secured "to break up" the cold, but she gradually grew worse until after a week it was found necessary to call a physician When I saw her she had catarrhal sore throat and some bronchial râles with a persistent and severe cough I was informed that for several days she had been ailing with what seemed to be only an ordinary cold Percussion sounds normal Auscultation revealed nothing beyond a bilateral bronchitis with a tendency to involvement of the small bronchi and in a few instances the air cells Pulse 120, temperature 102 degrees The symptoms increased in severity for a week, the temperature gradually rising to 104 6 degrees, and the pulse to 140 Percussion revealed small areas of dullness in the middle third of both lungs, but chiefly in the left The respiratory sounds were modified, presenting bronchial râles, vesicular crepitation, dyspnea, some distress was complained of in the stomach No other pain was present The symptoms began to subside in eight days and at the end of another week she was dismissed, the lungs being clear and respiration normal The third case was an adult

Case 3—Mrs E, was in usually good health, had always been well, having never needed to consult a physician, except for sore throat from which she suffered at times At the time of her exposure she was in a severe snow storm and became thoroughly chilled For several days she suffered from a severe catarrhal cold of the nose, throat and bronchial tubes Soon however, she felt quite well and resumed her ordinary household duties The first exposure occurred at Christmas time Another exposure occurred in one month The cold was more severe I made an examination of the patient and found her to be suffering from a well defined case of broncho pneumonia Careful nursing and the usual treatment for ten days restored her to comparatively good health, but a slight yet persistent cough remained Upon my advice she did not resume all her household duties and exercised greater care in guarding against exposures Notwithstanding every precaution, in about eight weeks, that is in the latter part of March, another attack supervened This time the patient was in bed two weeks The characteristics of broncho pneumonia were well marked and later, hepatization of the lower lobe of the right lung occurred A rusty or sanguineous sputum, which had not been present in previous illnesses, was expectorated for a week The disease was bilateral, the chief obstruction to respiration existing in the upper portion of the left lung and the lower portion of the right lung This seizure was more obstinate than any preceding The patient rallied slowly, and a well defined interstitial inflammation remained, in a comparatively active state, involving the lower lobes of both lungs The pulse remained at 90 to 100, and the temperature at 100 degrees to 101 degrees The cough was persistent and the expectoration and dyspnea troublesome The microscope showed an abundance of bacilli tuberculosis From this time the case progressed gradually downward, with seldom a temporary rally until death occurred just two years and six months from the first exposure An uncle and an aunt of this patient are said to have died of consumption

Case 4—The last case I wish to report is now under observation (June, 1893) She has been subject to catarrhal colds for several years Last autumn she was living with a married sister, and the sickness of one of the children caused her to overwork Later, she contracted a cold from which she recovered slowly She returned home in the early winter and felt quite well but had a slight cough until February The latter part of that month she contracted a cold which was very obstinate March 1, 1893, I was called to see her and found a well-defined case of broncho-pneumonia I learned that she had suffered in the first place from a catarrhal cold involving the nose and throat She recovered after a week, but a persistent cough remained In a few weeks she called at my office and I found an interstitial inflammation of the lungs involving the lower and middle thirds of both lungs Both nasal and laryngeal catarrh were present, and she suffered considerable from dyspnea Pulse 80, temperature 99 The microscope showed many micro cocci but no bacilli tuberculosis in the sputum

These four cases have been related to show the difference in the prognosis usually in adults and children In children, the temperature may run higher, the symptoms be more acute, but the prognosis is more favorable, especially after five years

Of the last 1,000 cases of all diseases that have come under my observation, 221 were cases of lung disease and of these 20 were cases of broncho-pneumonia One was in an old lady who died Four in adults between 28 and 37, one of whom died and another is the fourth case related above, the other two have a persistent cough with a doubtful prognosis Fifteen were in children from two and a half to eleven years One, the subject of whooping cough, was two and a half years old and died The others all recovered, of whom only two were considered dangerously sick

I refer to this experience to illustrate four facts which I believe to prevail in reference to the etiology and prognosis of broncho-pneumonia

1 Old people almost always succumb to an attack of broncho-pneumonia

2 Young adults are likely to recover slowly or develop phthisis

3 Children over five years generally recover

4 Children under five years show a heavy mortality

Another fact which may be reiterated here for the purpose of making it more emphatic is Many cases of broncho pneumonia are so slight as to be allowed to pass without consulting a physician It may be affirmed with probability that many cases of severe catarrhal colds in children, which come under the care of physicians and are treated merely as severe colds, would upon careful examination, be found to be cases of mild broncho-pneumonia

It is known that the rusty sputa, commonly supposed at one time to be pathognomonic of pneumonia, may be present in severe cases of bronchitis and broncho-pneumonia Hence great care is often necessary to prevent a confused diagnosis

Any physician may be troubled to make a correct diagnosis in many obscure cases, and it requires a very accurate ear to be positive without the aid of instruments

The limited area of dullness on percussion, the slight disturbance of the respiratory murmur, except by bronchial sounds, the slight change in vocal fremitus and bronchophony all aid in determining the character of the disease

The treatment of mild cases is simple enough A jacket of cotton batting should cover the chest Some stimulating liniment, turpentine, or camphorated oil applied twice or thrice a day will assist in making the patient comfortable Soothing and anodyne cough mixtures, inhalations of medicated steam or sprays, and rest in bed will serve to restore the patient to health, in the majority of cases, in a few days If the case is prolonged, or if there is a tendency to recurrence, as in the two cases reported which occurred in adults, a sustaining and general tonic treatment must be prescribed, viz concentrated food, malt, cod liver oil, hypophosphites and iron I have felt that the use of aromatic sulphuric acid, boric acid and salicylic acid and creasote internally have given me excellent results

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PNEUMONIA—PATHOLOGY AND SYMPTOMATOLOGY

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY F S CHURCHILL, M D

CHICAGO

Croupous pneumonia, in the child as in the adult, may be defined as an acute, infectious self limited disease, having its chief pathologic manifestations in the lungs In this paper the writer proposes to discuss some of the points in the pathology and symptomatology of the disease

A —PATHOLOGY

A clear comprehension of the pathology of the subject necessitates a brief glance at the child's lung in its normal condition Here, the chief points of difference from the adult lung are as follows the bronchial tubes are larger, the alveoli smaller, proportionally, than in the adult, the inter-alveolar spaces are more extensive, and more richly supplied with blood vessels, also in the alveolar walls, the blood vessels are seen to be larger and more tortuous, giving to the organ the appearance of the lung of obstructive cardiac diseases These are the main points of difference between the adult and child lung Obviously, a slight temporary congestion of the pulmonary vessels could easily give rise to some of the physical signs obtained in croupous pneumonia, e g, dullness, bronchial respiration and even bronchophony In such case we might be led astray and think we were dealing with a pneumonia, but time and the course of the disease will clear up any doubts we may have. The writer recently saw what he believes to be such a case, occurring in the practice of Dr. Christopher, during the latter's temporary absence, by whose courtesy he is allowed to refer to it.

A boy, 8 months old, was passing three to five loose, greenish foul smelling stools daily, when he suddenly developed a rather rapid respiration (60), with a high temperature. Examination of the chest showed at lower angle of left scapula a small area of rather high pitched respiration, with numerous fine and coarse moist râles, both right and left, especially left, no dullness. Next day and the following, there was distinct dullness, increased vocal fremitus, bronchial respiration and bronchophony, with continued rapidity of respiration. The writer was in doubt as to whether he was dealing with a pneumonia or a temporary congestion of the pulmonary capillaries, but was inclined towards the latter view, his opinion being based on the following facts: absence of the crepitant râle, the significance of which we shall mention later, absence of pain, the continued crying and struggling of the child on examination, the absence of dyspnea and cyanosis, for though breathing rapidly, the patient was not distressed for breath—was not "oxygen-hungry"—and most of all, the course of the temperature curve. With the belief that the main trouble was in the intestinal tract, and inclining to the view that the pulmonary lesion was an inflammation of the smaller tubes and even of the alveoli, *secondary* to the bowel trouble, the infant was given large rectal enemata of water at 90 degrees F., each one of which was followed by a decided drop in temperature within one hour, had there been a pneumonia, the temperature would probably not have been so influenced. Within a few days the physical signs noted in the chest disappeared entirely, and there was nothing in the history of the case suggestive of crisis. There is now no doubt in the mind of the writer that he had to do with a temporary congestion of the pulmonary capillaries, secondary to the intestinal lesion, and giving rise to physical signs, identical with those obtained in genuine croupous pneumonia. Finding such signs we ought, it seems to me, always to bear in mind the possibility of such a temporary lesion, reserving our diagnosis and awaiting the further progress of the case. This from the clinical standpoint, pathologically, we should of course, have more positive evidence to guide us.

The pneumonic lung of the child has not the distension nor solidity observed in that of the adult, it is denser and darker colored than normal and of a bluish-violet or leaden-tint. On section, the surface is comparatively smooth, the granular appearance seen in adults and caused by the filling of the air vesicles with the inflammatory exudation, being much less marked and sometimes even absent owing, (according to Fox, Atlas Pathological Anatomy, p. 17), to the small size of the vesicles. As is well-known, the three stages of engorgement, red and gray hepatization, are observed in the child, but are more apt to coexist than in the adult, instead of resolution, it is not uncommon to find abscess following the third stage, and thus we may even see the three stages and abscess coexisting, these abscesses may be multilocular, each division being separated from its neighbor by a wall of hepatized tissue, they are apt to be found near the surface of the lung and, in such cases we, of course, are apt to find coincident adhesive pleurisy. Here the abscess may break into the pleural sac and give rise to a hyo-pneumo-thorax, one or two such cases have been reported (Meigs and Pepper, Barthez and Rilliet). During his service as hospital interne, the writer saw such a case in an adult, the diagnosis being confirmed by autopsy.

Microscopically.—The appearance of the pneumonic lung in the child, is much the same as in the adult: in the first stage the blood vessels of the alveoli are seen protruding into the lumen, and already there has begun the exudation of a viscid fluid and red and white corpuscles, in the second stage, this exudation continues, but in greater quantity, usually the exudate is fibrinous, rather than cellular in character, but entangled in the meshes of the fibrin, we see numerous red and white corpuscles, in the third stage, the exudation has begun to liquify and is more purulent in character. Von Jaksch (Arbieten Pediatrische-Henoch, Fest. 1890) has also observed in microscopic preparations, immense numbers of diplococci, which, in their morphologic appearance, resembled very closely the pneumonia microbes described by Frankel, they appeared to cluster most thickly in the alveoli, and, in the opinion of Von Jaksch, emphasize the observation made by many that the microorganisms described by Frankel, stand in the closest relation to pneumonia. Banti also (*Centralbl. f. Bakteriol.*, IX. 5), in his analysis of forty-seven cases, notes the almost invariable presence of the diplococcus lanceolatus, not only in the lungs and pleuræ, but also in the blood, and states that variations in the intensity of the disease depend on the degree of virulence of the microbe.

Locality.—Well-known facts as to the locality of pneumonia are its tendency to affect the lower, rather than the upper lobes, its occurrence on the right more frequently than on the left and also the occasional existence of a central patch, surrounded by healthy lung tissue, often causing much doubt as to diagnosis. Henoch (Sect. Dis. Children) says we may see a "mixed form" of pneumonia, i. e. patches of a croupous nature occurring in the same lung, with those of broncho-pneumonia, and in this connection quotes Steffen (Klinik der Kinderkrankh., i. S. 146), Steiner and Damaschino (Paris, 1867) and Virchow.

B.—SYMPTOMATOLOGY.

The diagnosis of croupous pneumonia in adults is usually a comparatively easy matter, so generally do we see the classical picture of sudden onset, with chill, stabbing pain in the side, suppressed cough and "rusty sputum." But in children we are by no means so apt to find this complex of symptoms, and the diagnosis is often very difficult, even impossible at the first visit, when one is apt to get such a history as the following: the child has been taken suddenly ill, or there may have been premonitory symptoms for a few hours, rarely do we see the rigor so common in adults, though Latimer says (Archiv. Ped., Nov. '91) it is usually present, and Henoch (Vorlesungen uber Krankheiten, S. 330, 1881) has occasionally observed one in children over five years old, rather is the nervous disturbance apt to manifest itself by vomiting or convulsions—the latter more especially in infants, and they are sometimes followed by active delirium, general hyperesthesia or by stupor, with slight opisthotonos and retraction of the abdomen, pain, if complained of, usually located at the epigastrium, headache is also common Thus, at the very outset we may have our attention directed either to the head or abdomen, rather than the thorax, as the seat of the trouble—and having any one or all of these symptoms suddenly developing with a rise of temperature, we should bear constantly in mind the possibility of a beginning croupous pneumonia, and proceed to a thorough physical examination of the child

1—*Inspection* Patient usually found lying on bed or on mother's lap, breathing rapidly, often with expiratory "grunt," face flushed, sometimes more on one side than on the other, dilatation of the "alæ nasi," is often noticeable and may be the earliest sign suggestive of intra-thoracic trouble The general expression of the face is one of pain though the child usually does not cry nor resist examination, doubtless on account of pain from coexisting pleurisy, for the same reason cough, if present, is apt to be suppressed, rarely expectoration, except in older children, but we should carefully examine the vomitus for any sign of "rusty sputum," which very likely has been swallowed, after being coughed up Inspection of the chest is very apt to show the affected side lagging in respiration

2—*Palpation* Vocal fremitus may be increased, or a peculiar thrill may be imparted to the hand or respiration

3—*Auscultation*, may give rise to the typical sign of bronchial respiration, moist râles, and bronchophony, rarely do we hear the crepitant râle in children under three years of age, if heard it is, according to Dr J L Smith, proof positive of the presence of pneumonia, its usual absence is due to the small size of the alveoli

4—*Percussion*, which should be practiced last, in the physical examination of the chest, may reveal dullness, or, as is more commonly the case, there is, to the finger, a greater sense of resistance over the affected area Here we shall, of course, remember the fact that the liver may be forced up by the crying of the child and thus give rise to dullness at the right base

The above might be regarded as the classical picture of a croupous pneumonia, but unfortunately we too often fail to find the group of symptoms—one or many of the characteristic signs may be entirely lacking, e g, physical signs in the lungs may be entirely absent at first, not developing till later, in two to seven days, or in a few cases which have been reported, never appearing (Townsend Archiv Ped, April, 1889, who also gives D'Espine, Rev de Med, February, 1888) Such cases are not rare, though often are not detected Here we have to do with a "central pneumonia," i e, a patch of consolidation in the interior of the lung, so surrounded by healthy lung tissue that we fail to detect any abnormal signs on examination of the chest, and the diagnosis must rest on other symptoms But sometimes we can detect deep seated consolidation by deep percussion, when we may also obtain the sense of resistance spoken of above Repeated and thorough exploration of the chest should be made daily, and sooner or later we shall probably detect the characteristic signs, except of course in the few cases where the pneumonic process continues central As the writer has in several cases found characteristic signs only high in the axilla, he ventures to emphasize the importance of careful exploration of the chest with the stethoscope—though this last point is of course well known and mentioned by all the authorities

Cerebral Symptoms, varying in intensity from restlessness to severe convulsions, are very common, but contrary to the prevailing opinion, they do not seem to be especially associated with apical pneumonia as observed by Holt (Med Rec Apr 7, 1888), Minot (Keating's Encyclo), Eustace Smith (Dis of Children), Townsend (Archiv Ped March, 1889), and others, yet, in this connection, may be mentioned two interesting cases reported by Aufrecht (Archiv Ped, Oct 1890), in which pneumonia of the right and left apices was followed by right and left hemiplegia respectively, both recovering Speculation as to the cause of these complications is of interest, probably either an edema of brain and meninges, or a meningitis of infectious origin, secondary to the pulmonary lesion

A certain degree of cyanosis is usually observed in croupous pneumonia, but seldom to the extent seen in broncho-pneumonia Von Jaksch (loc cit) has, however, observed two cases, already referred to in this paper, in which there was a very marked degree of cyanosis, steadily increasing till death, but here, this symptom was due to the presence of a pericardial effusion, which, however, manifested absolutely no other suggestive sign till one day before death, though careful exploration of the chest had been daily made Von Jaksch concludes from these two cases that increasing cyanosis in pneumonia, even with no other sign of pericardial effusion, should warn the medical attendant that this complication is imminent and the prognosis, consequently, more grave

The same author also reports (loc cit) the existence of a considerable degree of leucocytosis, (1 40, 60 or 70) even being observed, it is of course temporary, and, occurring early in the disease, may be of value in determining the diagnosis, moreover the observation could be easily made, for, occurring in such a marked degree, a blood count would not be necessary, microscopic examination of the blood alone being sufficient to show a very great increase in the number of white corpuscles In these cases the hemoglobin is also much diminished

The range of temperature varies in different cases, from 102–103 degrees in moderate cases, up to 106–107 degrees, in the more serious, very apt to be a slight morning fall, but occasionally is seen the so called "inversion of the thermic curve" (Townsend loc cit), i e, morning temperature higher than the evening A continued temperature of over 105 degrees is serious

The pulse and respiration are more rapid than normal, especially the latter, and this disproportion between respiration and pulse is 1 2 or 2 5, instead of 1 4, the normal, may be of diagnostic value, cases have been reported in which the respiration reached 104 (Edwards—Archiv Ped March, 1892) and even 127 (Hirsh, Annals of Gyn and Pediatry, December, 1890), the former died, the latter recovered

The end, like the beginning of croupous pneumonia, is apt to vary somewhat from the same stage in adults, the proportion of cases ending by crisis is greater than in adults, also physical signs are more apt to persist after crisis in children, and may continue for weeks, or even months Such cases of course give rise to considerable anxiety, especially for those with a tuberculous heredity, the prognosis, however, is not necessarily unfavorable and in the course of time all the signs may disappear and the patient completely regain his perfect state of health.

In conclusion, it may be said that croupous pneumonia in children differs from that of adults, clinically more than pathologically, that its diagnosis is often very difficult, its symptoms varied, and, as a rule, less well marked than in adults, the physical signs often appearing late, occasionally not at all, its course generally favorable in strong children, and, finally, that, though in obscure cases we should make repeated and thorough daily examinations of the chest, our diagnosis must be made from the history and general clinical picture, and not be dependent entirely on the results of careful explorations of the chest.

THE THERAPEUTICS OF BRONCHITIS

Read in the Section on Diseases of Children at the Forty-fourth Annual Meeting of the American Medical Association.

BY I. N. LOVE, M.D.

PROFESSOR CLINICAL MEDICINE AND DISEASES OF CHILDREN, MARION SIMS COLLEGE OF MEDICINE; EDITOR MEDICAL MIRROR, ST. LOUIS.

Some observers have taken the position that bronchitis is due to a special germ, its point of entry being the air passages, and that the resulting disturbance is but an incident. The majority of us, I believe, will admit, however, that bronchitis as a rule is occasioned by simply "taking cold." The conditions favorable are constipated habit, improper diet, disturbed digestion, perverted secretions and exposure to cold, resulting in the chilling of the surfaces. As a consequence of this combination, we may have bronchitis or, in fact, a catarrhal condition of any one or all of the mucous membranes of the body. Were it not a bronchitis it might be a laryngitis, a rhinitis, a gastritis, an enteritis, a nephritis, a cystitis, or in fact we might have all of them combined in the same case. If in any marked degree, we would not have our case long.

However many germs there may be floating in the medium which surrounds us, the conditions just mentioned are ample in themselves to produce serious disease, and in my judgment are the direct cause in most instances. Possibly, were it not for the condition of the system developed which I have just mentioned, the human organism might be able to resist the attacks of most germs; at all events, these conditions furnish a standing invitation to any and all germs, whether they be the Klebs-Loffler bacillus, the germ of Freidlander, Eberth or others which have not yet been named.

In the therapeutics of bronchitis we must bear in mind that the cause in the majority of instances has been chilling of the surfaces, a disturbance of the circulation, a stasis in various parts of the body, chiefly in the bronchial mucous membranes. We must not ignore the general torpor of the glandular outfit. Having interrogated all the vital organs and investigated every point, in the majority of instances we can safely purge our patient. We should not be satisfied with the statement given by the attendant that the bowels were moved to-day or yesterday well. Even though a diarrhea be present, as it frequently is, produced by the same causes as produced the bronchitis, we are safe in flushing out the alimentary canal—clearing the decks for action. Fermentative material, irritative matters and accumulated ptomaines will thus be gotten rid of, and to this end a reasonably brisk calomel purge, followed by castor oil or something pleasanter, solution of citrate of magnesia, etc., will be in order, and by the way, added to the castor oil or in conjunction with the purgative, ten or fifteen-drop doses of oil of turpentine on a lump of sugar may well be given every two or three hours. It is one of the best stimulators of the glandular system that we have. It is a sweetener of the alimentary canal. It is almost an ideal remedy in bronchitis and pneumonia, and in this connection, I would suggest that cloths wet in turpentine from time to time may be placed in position for evaporation near to the patient. The remedies which we have given for the clearing out of the bowels, together with the turpentine, also serve to stimulate secretion upon the part of the mucous glands of the air passages and favor expectoration. In our treatment, however, this thought should be followed up, and to this end nothing is better than the benzoate of soda given in doses ranging from ten grains to a drachm, well diluted, every hour according to the age of the patient.

Local applications to the chest, such as turpentine stupes and camphorated oil, together with a dry poultice made by covering the chest with oiled silk, upon the outside of this, a layer of cotton batting—the whole held snugly in place by a tightly, well adjusted flannel bandage. The bandage properly applied to the chest is of great value in bronchitis and pneumonia, serving to support the often over-taxed chest muscles, acting as does a splint to a broken leg.

In the initiatory stage of the attack of bronchitis, the temperature must be watched. If very high, some one of the antipyretics should be given in a stimulating menstruum to reduce the temperature within proper limits. I am not of those who believe that fever is conservative and physiologic and may be ignored, no matter what its cause may be. Too high a temperature is dangerous, whether the patient have typhoid fever, pneumonia or bronchitis. A temperature of 105 degrees in a case of bronchitis should be reduced the same as in other conditions because the nerve centers are in danger. We need not disturb ourselves about a temperature which is not higher than 102 degrees, although it should be carefully guarded.

We must bear in mind that in bronchitis in children, however limited the surface involved, we may soon have a very pronounced aggravation of our case, extensive inflammation by continuity of surface, even to the point of a capillary bronchitis or one step further, to a catarrhal pneumonia. It should be our effort to encourage secretion on the part of the inflamed mucous surface, and expectoration. In children, particularly in infants, here is our chief difficulty, their inability to expectorate. A very slight cold with the resulting bronchial catarrh in a babe, is a serious, dangerous condition, and that which in one older would be simple and readily thrown off may soon result fatally. The mucus secreted is retained. The inflammation extends downward into the smaller bronchial tubes, retention goes on and our little one practically drowns from within. A free emetic will often save a life. Indeed prompt measures are essential to the proper management of bronchitis in children, and in fact this should be the rule in adults also, for no doubt the sensitive mucous membrane present in a light case of bronchitis, invites the germs of pneumonia, diphtheria and other diseases

Stimulation at the proper time is important, and I often give to good advantage, one or two teaspoonfuls of equal parts of whisky, glycerin, Forbes' diastase and honey

Another important step is the securement of rest, and bearing in mind that we must not check secretion, this must be obtained at all hazards

In all the diseases of children, the sensitive nervous system must be kept in mind, and no word in our therapeutic vocabulary should be so prominent as *Rest* The old-time remedy, Dover's powder, here comes in handily—one to three grains every one or two hours, as may be necessary to accomplish sleep

We can not safely overlook the teething process, for while this is not the direct cause of bronchitis or other diseases, it is a predisposing one In other words, the teething child's nervous system is "on edge," and it is prone to explosions in digestive apparatus as well as its respiratory system Interrogate the gums and lance them if angry and resentful

Malaria can never be ruled out of our medical philosophy—least of all in children, but its expression in the latter is more varied and indefinite than with adults It is remarkable how often it is the most potent factor in a case of child's bronchitis—and in no case can we safely ignore it Often, when all other remedies have been futile, the liberal administration of quinin will clear up a bronchial catarrh as if by magic

After the acute stage has passed, with a view to prevent a sub-acute and chronic continuance, ten-drop doses of turpentine or one or two doses of terpin hydrate should be given every three or four hours, along with mild tonics and the most nutritious food

In closing, I desire to lay special emphasis upon elimination, tranquilization, stimulation, nutrition and oxygenation

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THE TREATMENT OF BRONCHO PNEUMONIA IN CHILDREN

Read in the *Section on Diseases of Children* at the Forty fourth Annual Meeting of the American Medical *Association*

BY FRANK S PARSONS, M D

NORTHAMPTON MASS

A comfortable room, well ventilated, and good cleanly surroundings are as essential to the successful treatment of broncho pneumonia as any other disease

Care should be exercised to prevent all undue exposure to sudden changes of temperature, draughts of air, etc, which will in any way increase the liability of contracting a "cold," or aggravating one when already contracted

The child, sick with bronchial inflammation, should be clad in a warm, long nightdress made of soft flannel, or cotton flannel, and kept in the same and in bed, until the severity of the disease has passed, unless absolutely necessary to make a change for the sake of cleanliness In the first place, in these cases of broncho-pneumonia, it is well to direct that a chest protector be made of eiderdown flannel, which is warm and thick, besides being very soft and unirritating This can be easily made out of one piece, doubled, and cut of sufficient length to reach as far down as the level of the umbilicus all around; an opening large enough to slip over the head is made in the center of the piece, and armholes cut out to fit, then into each of the sides are sewed some bits of tape for tie strings, so that when applied the sides can be so fastened as to completely inclose the chest

I am of opinion that some such protector is of more value in broncho-pneumonia than all the poultices, ointments, or other applications usually made

Whatever be the value of a poultice applied to the chest of a child with simple bronchitis, which I believe is small, it has no place in the treatment of broncho-pneumonia, indeed, I have seen them do more harm than good, unless frequently changed they become cold and clammy, and the exposure necessary to change them is an unwarranted one, which does not benefit the infant in this disease Counter-irritants, as strong as blisters, are not to be thought of in the treatment of catarrhal affections of the bronchial tract in children It is a harsh treatment, without any benefit to be gained above other simpler methods

When we can see the case early enough, we often have time to confine our medications to simply the treatment of the cough, and the assistance of resolution, but when the vital powers of the child are weakened, there must be given some support to them by stimulation previous to any attempt to treat the cough, otherwise the child may quickly succumb to over-strain of the heart

For such stimulation, I have been in the habit of employing a mixture of one part brandy to five parts pure boiled water, preferably hot, and of this mixture half a teaspoonful is given every half hour until there is evident effect manifested on the pulse. Occasionally a drop of digitalis is added, if the case requires further stimulating support The condition of the pulse is the best guide to the strength of the child

In some cases, it will be necessary to combat the elevated temperature with antipyretic drugs, and of these the best results are, perhaps, obtained by the use of acetanelid or aconit I prefer the latter in very young children, because the former is insoluble in water It is always a good plan to be on the safe side and combine digitalis with either antipyretic.

Occasionally it may be found necessary to give an emetic, during the course of the disease, to free the stomach as well as the bronchial tubes of viscid mucus, but among the weakly there is more or less debility to be expected following an emetic which should cause us to move with caution in its administration

For similar reasons, a little calomel given, occasionally, to free the bowels and stomach of mucus is often beneficial

During the course of the disease the position of the child's body should be often changed, so that the danger of hypostatic congestion will be lessened

When a case presents that indicates an especial degree of "tightness over the chest," or suppression of cough, there is often benefit to be found in the boiling of water in the sick-room, the steam arising therefrom gives a moisture to the atmosphere which favors the expulsion of the secretion by adding to it watery elements

I have purposely left the consideration of the treatment of the cough until the last, because of its importance When a cough is treated by the administration of drugs there should be a definite reason for every one that enters into the composition of the prescription Compounding a cough mixture at random, with the hope of hitting something that will stop the cough, is not only an unscientific way of treating it but one will be fortunate if he escapes doing actual harm Stopping a cough is not a desirable thing to do, cough is nature's mode of getting rid of offending matter in the respiratory tract, and to stop it, in these catarrhal diseases of children, simply allows the accumulation of mucus in the bronchi to increase more and more, without the necessary efforts of nature to expel it

In broncho-pneumonia we have a condition of stasis of the expulsive powers of the bronchi, due to the thickness of the mucus and the weakened condition of the muscles of the tubes, from repeated exhaustive attempts to cough up the secretion during the preexisting bronchitis Our first indication in treating the cough seems properly to be the stimulation of the mucous glands to increase the watery elements of the secretion, and, thus render the latter less tenacious For this we may employ steam, by spray, or the boiling of water as previously indicated, but the drug best adapted to this purpose is ipecac in some form

Combined with ipecac, some slight admixture of opium tends to hasten the second stage, as well as to relieve the irritability of the first, the form of opium which has, in my experience, had the most happy effect in this respect is the combination with camphor in the form of paregoric

In all fever cases, and broncho pneumonia is no exception, there is high color and concentration of the urine, indicating more or less tax on the kidneys from congestions, therefore, I have employed the citrate of potash to encourage some mild diuretic action and increase the ease of elimination For such reasons, I generally employ the following formula in bronchial affections of children

℞ Vini ipecac ʒ i
Potass citratis ʒ ss
Tinct opii camph ʒ ii
Elixir simplicis ℥ i
Aquæ distil qs ad ℥ iv

M Sig A teaspoonful every two hours to an infant one month old

The use of the simple elixir will prevent the mixture souring in warm rooms or hot weather, where often syrup vehicles will render the mixture unfit for use in a few days

The stimulating expectorants, so-called, and especially ammonia, are useful in the later stages of this disease, after free, watery secretion has been established and all that is necessary to be accomplished is the promotion of efficient efforts at its expulsion from the bronchial tract In the first stage they are useless Tonics of iron are often indicated in convalescence, and good nutritious diet in older children is always useful

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SMALLPOX —There are more cases of smallpox at this time in different parts of the country, than have been reported for many years The continued neglect of vaccination can only have one result, that is, increase of smallpox

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THE THERAPEUTICS OF CROUPOUS PNEUMONIA

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY JOHN A LARRABEE, M D
PROFESSOR OF OBSTETRICS AND DISEASES OF CHILDREN, IN THE HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE, KY

In an attempt to present to you for discussion, the subject which, by your too partial choice has been assigned to me, I shall endeavor to keep as nearly as possible within its limits, and with a due regard for the value of your time, I shall be as concise as possible

It will, of course, be understood that pneumonia known as catarrhal or bronchial, which prevails to so much greater extent in infancy and childhood, but differs so widely in both etiology and treatment, shall form no part of this discussion beyond mention

The attempt to draw an age limit around croupous pneumonia by many of the older writers has been responsible for many failures in diagnosis

While few physicians at the present time fail to diagnosticate croupous pneumonia in the adult at some time during its progress, I must record my conviction, based upon experience, that many infants go to their graves annually, from croupous pneumonia, with death certificates signed "worms," "teething," and convulsions, and that quite as many aged persons escape diagnosis and are marked "senile debility " So much, then, for former teaching, that croupous pneumonia is a disease of vigorous adult life

In the discussion of the therapeutics of croupous pneumonia, I recognize the importance of tabulating only those means which through a long period of time have proven valuable in the hands of the writers The value of papers of this kind, is in direct proportion to the truthfulness of the statement therein contained, and to the careful clinical observation and experience of the author In treatises designed for text-books, it is quite proper that all the known therapeutics, both practical and speculative, should be compiled, the endorsement of which is not made by the author and little of which has been the result of his experience

I shall, therefore, make no attempt to enumerate the so called remedies for this disease, however much extolled by others, nor shall I criticise those which in the experience of others have been valued I recognize various therapeutic roads leading to the same desired terminus, and I care as little what means may be employed by others equally skilled, as I would to know with what tools a carpenter has completed my house, if he has completed it according to the plans and specifications

Regarding pneumoniæ croupose as an acute, infectious disease, running a definite and limited course with a pronounced tendency to recover by natural processes alone, I might be expected to say very little concerning its therapeutics

Notwithstanding the fact that medicines are powerless to cut short the disease, and the conviction expressed that very many will recover without any medication, few physicians possess a clientele of sufficient intelligence to risk a trial

For this reason, as well as to favor the course of nature in repair, I constructed the following prescription, some twenty years ago, since which time I have made it the sole treatment from the beginning to the close of the attack

Moreover, it has been given as a part of my instruction to medical classes for nineteen years, and it is safe to say that at least a thousand practitioners have made it their chief reliance and have so expressed themselves to me by letter or person

The indications—therapeutical—which are met by their combination are

1 Satisfaction on the part of friends, that something is being done for the patient

2 The satisfaction on the part of the practitioner that he is not doing harm to his patient

3 The promotion of diuresis

4 The promotion of diaphoresis and increased elimination of carbonic acid with reduction of temperature

5 Increased alkalinity as shown by urine and a lessening of fibrin in the blood, promoting free mucous secretion and lessening the tendency to coagulation of blood

6 Gentle, but diffused stimulation of the nerve centers, favoring sleep and preventing spasm

℞ Spts eth nitrosi
Potassæ acet āā—ʒiss
Spts mindereri
Aquæ camphoræ āā ℥iij
To be left with slightly acid *reaction* as shown by litmus
M ft Adult, dose, tablespoonful, child, dose, teaspoonful, every two hours

To this may be added tr aconit or veratrum if needed, and in convalescence tr ferri chloridi Such additions always to be made as extra doses and not a part of the prescription

CARDIAC STIMULATION

Death approaches the sufferer from croupous pneumonia always through the heart For this reason it is of the utmost importance to watch *this* organ, from the inception to the close of the disease With the trained finger upon the *pulse and the educated* ear over the precordia, we catch the first signal of danger To be forewarned is to be *forearmed* Nothing is more essential to the cardiac *therapeutics* than a knowledge of the mechanism of *heart failure* in pneumonia *Pari passu* with the consolidation of lung and in direct proportion *to its extent, we have* a mechanical obstruction to the transfer of blood from the right to the left heart, and added thereto the addition of carbonic anesthesia *to muscle and* frame This occurs at a time when *ptomaines from* vegetable diplococcus are in circulation and before the anti-pneumotoxin has been formed in the albumen of the blood More blood is coming into the right auricle than can be forced through the lung by the ventricular stroke The right ventricle becomes so distended that the apex beat is completely *removed* from its original site, between the fifth and sixth ribs, and the ear placed over the heart detects a heavy dull sound, while percussion reveals an increased area of dullness In this condition the indications for improvement in the circulation become extreme and pressing How shall this be best accomplished? Is it philosophical to attempt relief by a vis-a-tergo, or is it more rational to attempt a vis-a-frontis? Are these the indications for the employment of digitalis? It may be a good *plan* to goad the tired ox that has fallen in the furrow if you want a little more work, but you will kill the ox It may be good therapeutics to stimulate a diseased kidney if you want a little more urine, but you will have a little less patient It may be good practice to give digitalis to a fagged out heart in the stage of hepatization of croupous pneumonia, but I doubt it Digitalis stimulates a weak heart by contracting the arteries and arterioles, by throwing the blood back upon the heart itself, and where there is no pulmonary obstruction the action is prompt and efficient, as in valvular patulencies, etc, but the very condition which is killing the patient in pneumonia would be rendered still more dangerous by such an agent Our fathers did eat manna in the wilderness and they are dead, but is it strange that venesection should occur to the mind as a possible solution of the question? Experiments in vivisection have demonstrated that a heart brought to a *standstill in* such diastole may be revived by aspirating the right ventricle

It has been ascertained that even ligation of the lower extremities just sufficient *to prevent* the return of venous blood, is followed by *immediate relief* to the heart In the same manner is the explanation of the sense of relief felt by the patient upon the application of dry cups and hot flaxseed poultice to the chest walls Pediluvia would also prove of service, were it not for the ever present danger of assuming the erect position

Notwithstanding it comes to us as a voice from the past, there is to-day much truth in the statement that "blood-letting is good in pneumonia" Bleeding and tartar emetic marked the heroic treatment of the sturdy yeomen of the early nineteenth century, and yet we find from statistics that the mortality for 1822 to 1832 was 10 per cent, while from 1880 to 1890 it was 18 per cent

Without attempting to revive a therapeutic so long abandoned and so universally condemned, it must be admitted that those old-time doctors struck some underlying principle in therapeutics which we, *with* all modern accomplishments, have failed to recognize That principle was the relief of the overburdened heart I propose, therefore, to demonstrate how this same desirable end may be obtained without jeopardizing the life of the patient and without inflicting upon him a long and tedious convalescence

I —BY AGENTS WHICH DETERMINE THE BLOOD TO THE SKIN

This may be accomplished by the warm pack, which, applied at a temperature of 98½ F, and protected by light woolens, envelops the body in an atmosphere of steam By this means the peripheral nerves are soothed and almost invariably this procedure is followed by quiet sleep

II —BY BELLADONNA

This time-honored and faithful servant of materia medica is too often lost sight of in practical therapeutics It has a place in all hyperpyrexias accompanied by paleness of the skin and in low stages of fever It is particularly adapted to the condition under consideration, being an *indirect stimulant* to the heart, diminishing the blood pressure by dilatation of the capillaries It is also a stimulant to the respiratory centers of the *brain, thereby* inducing a more perfect æration of the blood The comparative harmlessness of this remedy in infancy and early childhood enables us to push it quite up to its toxic effects It has done me yeoman's service

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The stimulating expectorants, so-called, and especially ammonia, are useful in the later stages of this disease, after free, watery secretion has been established and all that is necessary to be accomplished is the promotion of efficient efforts at its expulsion from the bronchial tract In the first stage they are useless Tonics of iron are often indicated in convalescence, and good nutritious diet in older children is always useful

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SMALLPOX —There are more cases of smallpox at this time in different parts of the country, than have been reported for many years The continued neglect of vaccination can only have one result, that is, increase of smallpox

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THE THERAPEUTICS OF CROUPOUS PNEUMONIA

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

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In an attempt to present to you for discussion, the subject which, by your too partial choice has been assigned to me, I shall endeavor to keep as nearly as possible within its limits, and with a due regard for the value of your time, I shall be as concise as possible

It will, of course, be understood that pneumonia known as catarrhal or bronchial, which prevails to so much greater extent in infancy and childhood, but differs so widely in both etiology and treatment, shall form no part of this discussion beyond mention

The attempt to draw an age limit around croupous pneumonia by many of the older writers has been responsible for many failures in diagnosis

While few physicians at the present time fail to diagnosticate croupous pneumonia in the adult at some time during its progress, I must record my conviction, based upon experience, that many infants go to their graves annually, from croupous pneumonia, with death certificates signed "worms," "teething," and convulsions, and that quite as many aged persons escape diagnosis and are marked "senile debility " So much, then, for former teaching, that croupous pneumonia is a disease of vigorous adult life

In the discussion of the therapeutics of croupous pneumonia, I recognize the importance of tabulating only those means which through a long period of time have proven valuable in the hands of the writers The value of papers of this kind, is in direct proportion to the truthfulness of the statements therein contained, and to the careful clinical observation and experience of the author In treatises designed for text-books, it is quite proper that all the known therapeutics, both practical and speculative, should be compiled, the endorsement of which is not made by the author and little of which has been the result of his experience

I shall, therefore, make no attempt to enumerate the so called remedies for this disease, however much extolled by others, nor shall I criticise those which in the experience of others have been valued I recognize various therapeutic roads leading to the same desired terminus, and I care as little what means may be employed by others equally skilled, as I would to know with what tools a carpenter has completed my house, if he has completed it according to the plans and specifications

Regarding pneumoniæ crouposæ as an acute, infectious disease, running a definite and limited course with a pronounced tendency to recover by natural processes alone, I might be expected to say very little concerning its therapeutics

Notwithstanding the fact that medicines are powerless to cut short the disease, and the conviction expressed that very many will recover without any medication, few physicians possess a clientele of sufficient intelligence to risk a trial

For this reason, as well as to favor the course of nature in repair, I constructed the following prescription, some twenty years ago, since which time I have made it the sole treatment from the beginning to the close of the attack

Moreover, it has been given as a part of my instruction to medical classes for nineteen years, and it is safe to say that at least a thousand practitioners have made it their chief reliance and have so expressed themselves to me by letter or person

The indications—therapeutical—which are met by their combination are

1 Satisfaction on the part of friends, that something is being done for the patient

2 The satisfaction on the part of the practitioner that he is not doing harm to his patient

3 The promotion of diuresis

4 The promotion of diaphoresis and increased elimination of carbonic acid with reduction of temperature

5 Increased alkalinity as shown by urine and a lessening of fibrin in the blood, promoting free mucous secretion and lessening the tendency to coagulation of blood

6 Gentle, but diffused stimulation of the nerve centers, favoring sleep and preventing spasm

℞ Spts eth nitrosi
Potassæ acet āā—ʒjss
Spts mindereri
Aquæ camphoræ āā ʒiij
To be left with slightly acid reaction as shown by litmus
M ft Adult, dose, tablespoonful, child, dose, teaspoonful, *every two hours*

To this may be added tr aconit or veratrum if needed, and in convalescence tr ferri chloridi Such additions always to be made as extra doses and not *a part of* the prescription

CARDIAC STIMULATION

Death approaches the sufferer from croupous pneumonia always through the heart For this reason it is of the utmost importance to watch this organ, from the inception to the close of the disease With the trained finger upon the pulse and the educated ear over the precordia, we catch the first signal of danger To be forewarned is to be forearmed Nothing is more essential to the cardiac therapeutics than a knowledge of the mechanism of heart failure in pneumonia *Pari passu* with the consolidation of lung and in direct proportion to its extent, we have a mechanical obstruction to the transfer of blood from the right to the left heart, and added thereto the addition of carbonic anesthesia to muscle and frame This occurs at a time when ptomaines from vegetable diplococcus are in circulation and before the anti-pneumotoxin has been formed in the albumen of the blood More blood is coming into the right auricle than can be forced through the lung by the ventricular stroke The right ventricle becomes so distended that the apex beat is completely removed from its original site, between the fifth and sixth ribs, and the ear placed over the heart detects a heavy dull sound, while percussion *reveals an increased* area of dullness In this condi*tion the indications* for improvement in the circulation become extreme and pressing How shall this be best accomplished? Is it philosophical to attempt relief by a vis-a-tergo, or is it more rational to attempt a vis-a-frontis? Are these the indications for the employment of digitalis? It may be a good plan to goad the tired ox that has fallen in the furrow if you want a little more work, but you will kill the ox It may be good therapeutics to stimulate a diseased kidney if you want a little more urine, but you will have a little less patient It may be good practice to give digitalis to a fagged out heart in the stage of hepatization of croupous pneumonia, but I doubt it Digitalis stimulates a weak heart by contracting the arteries and arterioles, by throwing the blood back upon the heart itself, and where there is no pulmonary obstruction the action is prompt and efficient, as in valvular patulencies, etc, but the very condition which is killing the patient in pneumonia would be rendered still more dangerous by such an agent Our fathers did eat manna in the wilderness and they are dead, but is it strange that venesection should occur to the mind as a possible solution of the question? Experiments in vivisection have demonstrated that a heart brought to a standstill in such diastole may be revived by aspirating the right ventricle

It has been ascertained that even ligation of the lower extremities just sufficient to prevent the return of venous blood, is *followed by immediate* relief to the heart In the same manner is the explanation of the sense of relief felt by the patient upon the application of dry cups and hot flaxseed poultice to the chest walls Pediluvia would also prove of service, were it not for the ever present danger of assuming the erect position

Notwithstanding it comes to us as a voice from the past, there is to-day much truth in the statement that "blood-letting is good in pneumonia" Bleeding and tartar emetic marked the heroic treatment of the sturdy yeomen of the early nineteenth century, and yet we find from statistics that the mortality for *1822 to 1832* was *10* per cent, while from *1880 to 1890* it was *18* per cent

Without attempting to revive a *therapeutic* so long abandoned and so *universally condemned*, it must be admitted that those old-time doctors struck some underlying principle in *therapeutics* which we, with all modern accomplishments, have failed to recognize That principle was the relief of the overburdened heart I propose, therefore, to demonstrate how this same desirable end may be obtained without jeopardizing the life of the patient and without inflicting upon him a long and tedious convalescence

I—BY AGENTS WHICH DETERMINE THE BLOOD TO THE SKIN

This may be accomplished by the warm pack, which, applied at a temperature of 98½ F, and protected by light woolens, envelops the body in an atmosphere of steam By this means the peripheral nerves are soothed and almost invariably this procedure is followed by quiet sleep

II—BY BELLADONNA

This time-honored and faithful servant of materia medica is too often lost sight of in practical therapeutics It has a place in all hyperpyrexias accompanied by paleness of the skin and in low stages of fever It is particularly adapted to the condition under consideration, being an indirect stimulant *to the* heart, diminishing the blood pressure by dilatation of the *capillaries* *It is also* a stimulant to the respiratory centers of *the brain*, thereby inducing a more perfect æration of the blood The comparative harmlessness of this *remedy* in infancy and early childhood enables us to push *it* quite up to its toxic effects It has done me yeoman's service in many an apparently hopeless case of threatened cardiac failure in pneumonia

III —NITRO-GLYCERIN AND THE NITRITES

May be expected to rescue a heart after the manner of aspiration, taking off the pressure and flushing the skin, even when brought to a standstill in the diastole of a full right ventricle Aconit and veratrum viridi certainly have a place in the treatment of pneumonia, the former, being a sedative from the start, is too dangerous for administration by continued dosing, the latter is safer than digitalis Fothergill's statement that "digitalis is both spur and oats to a heart," is preeminently true, and in low forms of fever where the adynamia is due to long continued hyperpyrexia I have attempted to show that the mechanism of cardiac failure in pneumonia has its foundation in an entirely different pathology I have been led to these conclusions by clinical observations and not by theory

Finding that in this disease alone I failed to obtain the usual slowing and filling of the pulse in the radial artery, I began to investigate the cause of the failure of this grand old drug so generally serviceable in crippled hearts

Alcohol will prove a far better cardiac stimulant in pneumonia, by reason of its power to dilate the capillaries, thereby retaining more blood in the skin, while at the same time it may have some value as a respiratory food

IV —APPLICATIONS TO THE CHEST

The feeling that something may be accomplished, at least for the comfort of the patient suffering with pneumonia, by local applications to the thorax is universally believed by the laity No doubt this idea had its origin in individual experience in many painful diseases Shall they be cold or hot, moist or dry? Heat is a stimulant and cold is a sedative Heat relieves pain under any and all circumstances Heat locally applied is a powerful stimulant to the heart, and, by its action upon the vaso-motor nerves, lessens active hyperemia of the brain

Physiologic experiments made upon the heart of a frog show that pulsations may be restored after a complete cessation by the application to this organ of a bit of cotton wrung out of very hot water, but they are again arrested by the application of cold I prefer warm to cold applications, although some authorities, particularly Germans, speak favorably of cold, and even ice packs in the treatment of pneumonia The choice is between poultices and cotton batting, protected by oil silk

Those of us who have experienced the relief of a congestive headache by a warm foot bath containing mustard, are best prepared to answer this question Is it probable that the same relief would follow putting the feet in cotton batting instead of hot water? Poultices are rarely properly made and seldom properly applied Moreover, they are, at best, a very clumsy application, and by adding weight to the chest walls embarrass still further the labored respiration A towel wrung out of very warm water wrapped once or twice around the chest and neatly covered by oiled silk is a far more elegant and comfortable application

By this means the entire thorax is surrounded with an atmosphere of equal warmth and moisture, the superficial vessels are dilated, pain is relieved and repair hastened Stimulating embrocations are also of benefit and are useful in proportion to the chronicity of the case The following prescription is a favorite of mine

℞	Ol succini rectificati	℥ss
	Ol caryophyli	mxx
	Liniment saponis	℥iiss
	M ft	

EXPECTORANTS

Cough is a constant accompaniment of pneumonia. At first dry, frequent and distressing, it soon succumbs to consolidation of the lungs and returns with commencing resolution This return is hailed with pleasure by the physician and with unnecessary alarm by the laity Perhaps it is the latter observation which has led to the employment of expectorant mixtures, most heterogeneous in composition and most therapeutically incompatible in application These mixtures generally contain the entire list of so called expectorants in the materia medica Ipecac and squills to loosen, senega and ammonia to stimulate, wild cherry and other tannates to check secretions, alkalies to lessen viscidity of mucus and opium to benumb sensibility Some of these prescriptions are a pharmaceutical curiosity Yet one meets with them with such frequency in consultation practice that it would appear that reform in this direction is making slow progress Such mixtures do little more than destroy the appetite and disgust the patient Water, given in abundance, and at short intervals, is the best and only expectorant required In cases of children, about the time of crisis of pneumonia with restlessness, cold extremities and pinched features I have seen great good from tincture of assafetida with whisky toddy As a protection to the chest during convalescence a neatly fitting vest made of one layer of carded wool or absorbent cotton quilted and covered by oiled silk should be worn upon the chest

PURGATIVES

It is probably the observations of others besides myself, that purgatives administered during the stage of hepatization of a lung are bad I have so often been called to cases made worse by the officiousness of some grand-dame, whose desire to purge amounts almost to insanity, that I am able to detect such interference by the collapse that has followed. I can give no explanation other than that purgatives add to the general depression at a time when the child is poorly able to stand it If the bowels need attention they should be moved by simple enematæ.

TEMPERATURE

The enthusiasm for the treatment of high temperature so popular a few years ago, has, in a large measure subsided, and it may now be said that thermometric observations are less liable to plunge us into therapeutic errors than formerly

I have never participated in this "Don Quixotic" fight of temperature, to the extent of allowing it to control my therapeutics, but have been content to treat hyperpyrexia alone, and always in relation to other existing symptoms

In catarrhal pneumonia I am guided altogether by respiration ratio, in croupous pneumonia by the pulse ratio as compared with temperature

It is exceedingly rare that I find a hyperpyrexia which does not yield to the warm bath or the warm pack, which I greatly prefer, and to the "tubing coils," known as my invention

Some danger always attends upon the patient suddenly assuming an upright position in pneumonia, on account of the sudden strain placed upon the heart I have more than once seen an immediately fatal result following such a procedure Hence the preference of the pack to the bath As I grow older in the profession and more experienced in practice, I am less courageous in the use of heroic measures I must confess to a timidity in the use of the so-called antipyretics known as the coal tar products or derivatives so highly praised by many excellent physicians Reduction of temperature, however desirable, ought not to be purchased at the expense of de oxidation of the blood in pneumonia

CEREBRAL SYMPTOMS

Previous to the investigations of Sternberg and Frankel and the discovery of the diplococcus or pneumococcus of Friedlander, cerebral pneumonia admitted of no rational explanation Various theories, in themselves ingenious, were made to account for the intense cephalalgia in adults, and for the initiatory convulsions of croupous pneumonia in infancy and childhood It was at one time thought that cerebral manifestations were more frequently associated with apex consolidation and I, myself from observation, was inclined to corroborate this statement

Prof J Lewis Smith recording his own valuable experience during an epidemic of cerebro-spinal meningitis in 1872 in New York city, makes a special mention of the great increase in the number of cases of croupous pneumonia prevailing at the time He evidently recognizes a pneumonic form of cerebro-spinal fever I have many times witnessed the recession of typical cerebro-spinal symptoms *pari passu* with the development of consolidation of the lung In infancy these cerebral symptoms, marked by convulsions and vomiting, are so common an accompaniment of croupous pneumonia that one is never warranted in pronouncing upon meningitis without a careful examination of the chest I am convinced that nothing but clinical experience will prevent young practitioners from making this seserious error, so completely do the brain symptoms overshadow those of the pneumonia In etiology, however, they do not differ from the symptoms produced by alkaloidal products of the microorganisms —*toxalbumins*—in other diseases circulating in the blood, e g, scarlatina, smallpox, measles and typhoid fever

So soon as the characteristic lesion of these diseases becomes established, these so-called brain symptoms subside as rapidly as they came With this etiology it is scarcely possible that one will be found administering drastic cathartics or applying leeches to the scalp Bromids and chloral are also of doubtful propriety

The warm bath, the warm wet pack to the chest and tubing cap to the head, is almost certainly followed by relief, quiet sleep and by reduction of temperature, which is also a factor in disturbances of the nerve centers by no means to be lost sight of in our therapeutics

CRISIS

So long ago as 1880, in my lectures, I stated that the sudden and remarkable change which occurs usually from the fifth to the seventh day, known as crisis must have some other explanation than the subsidence of inflammation Auscultation and percussion so frequently revealed no improvement which could reasonably account for such a change, for days after convalescence was established the local lesion could be readily demonstrated

The study of the micrococcus pneumoniæ crouposæ and its product, pneumotoxin, has led to the discovery of a so-called anti-pneumotoxin, supposed by the celebrated German scientists, the Klemperer Brothers, to be antidotal to the former The opening of this window certainly throws a flood of light into a dark recess Should the fond expectations of these earnest investigators prove true, your patience will not be burdened in future by lengthy papers upon the therapeutics of croupous pneumonia

The sick will be made to cure the sick, and the physician, armed with his hypodermic syringe, will act as a mediator between the two Unfortunately, however, for all these beautiful theories which comet-like, dart across the medical sky, dazzling our vision, they are soon lost below the horizon, leaving us to "darkle in the trackless void"

In diseases which secure an immunity against a subsequent attack, we have a right to expect much from inoculation Pneumonia in so far from securing exemption from future attacks, predisposes to them, and this has been the observation of physicians from time immemorial the world over I have in my practice a patient who has had croupous pneumonia seven times in six years and whose life has been in jeopardy several times

In conclusion, permit me to say that, while the majority of cases require little medicinal treatment, the successful practitioner will be on the alert to detect constitutional and hereditary weaknesses, in his little patients The importance which attaches to diathesis can not be over-estimated Pneumonia in a rachitic infant carries with it a far more grave prognosis than in a healthy child

The strumous and tubercular diatheses entail a series of consequences peculiar to each Delayed resolution in the lung and enlargement of the bronchial glands, indicate the use of potassium iodidi and muriate of ammonia with the daily application of tincture of iodin to the upper portion of the thorax

Cod-liver oil with marshmallow emulsion and the elixir lacto-peptine with tincture ferri chloridi and gentian as prepared by the New York Pharmacal Co, have proven to be excellent reconstructive tonics

DISCUSSION ON BRONCHO PNEUMONIA

Dr Jas B Herrick, Chicago, Ill —I think Dr Churchill rightly said that the diagnosis of pneumonia in a child was often difficult, for the reason that the classical symptoms are oftentimes entirely lacking We frequently have central pneumonia where the physical signs are so imperfectly marked that the diagnosis is very uncertain The pain is so frequently referred to the epigastrium that the attention may be drawn to this region, but the rapidity of the respirations should draw our attention to the chest I agree with Dr Christopher that the cough, which is often noticed in children, is frequently nothing more than a symptom of walking typhoid The broncho-pneumonia which occurs in the new-born is probably due to the inhalation of liquor amnii I do not favor the use of poultices in either bronchitis or pneumonia At first I attempt to lower the temperature by the bath, and if unsuccessful I then resort to the coal-tar preparations I have never seen a bad effect from these antipyretics

Dr Graham, Philadelphia, Pa —If I were limited in the treatment of pyrexia, I should not hesitate to accept cold as the best means I have used the cold bath frequently with good results If cold is applied at all it should be done fearlessly I have never noticed any depressing effects from its use We should begin the bath at a temperature of 72 to 80 degrees F I have also obtained good results from cold water injections, a pint to a pint and a half can be injected at a time I think aconit should be used with the greatest caution

Dr Work Indiana —I am in favor of poultices Have had good results from the administration of cinchonidia I invariably eliminate the bowels first I would not apply cold, for I prefer the application of stimulating poultices Onions and flaxseed meal make a very efficient poultice I continue effective elimination all the way through the disease

Dr Dorland, Philadelphia, Pa —I think the pneumonia of the new-born is almost always due to the inhalation of liquor amnii

Dr Chas G Jennings, Detroit, Mich —In bronchitis, which seems to be extending well down, we should be very accurate in our procedure It is a well recognized fact that this extension can be frequently arrested I find that a very sharp administration of antimony, ipecac or apomorphin is followed by good results Along with the antimony, one of the preparations of opium serves very well to modify its depressing action and also allays the nervous symptoms I believe the bath to be a stimulant to both respiration and circulation, as well as a good antipyretic Drugs may be used in the beginning of the disease, but during the latter part of the course I think the bath, beginning at 90 degrees and gradually reduced to 80 or 75, is a very great stimulant to all the functions and it will reduce the temperature to a very safe point I should certainly prefer a hot water poultice to an onion and flaxseed meal poultice In the rapidity of the respirations is a very important diagnostic sign I think digitalis is good occasionally

Dr W S Christopher, Chicago, Ill —I do not think an exceedingly rapid respiration without areas of consolidation should be diagnosed pneumonia Bronchitis may present exceedingly severe symptoms when the smaller tubes are not affected at all For the prognosis we are to be guided by the illness of the child An elevation of temperature is only serious when it reaches such a point that it interferes with the action of the white blood corpuscles, which is about 105 degrees In pneumonia, the labor is thrown upon the right heart, which leads to an over-filling of the veins, and for this reason digitalis should not be given Sweet spirits of niter is a very useful drug Purgatives which will empty the liver, and above all things which dilate the capillaries locally are to be recommended Capillary dilatation of the skin is very important and can be obtained by the use of poultices or jackets For my own part I prefer the poultices, yet in careless hands they are exceedingly dangerous I think we can derive a great deal of benefit from baths given at the temperature of the body Water at a temperature of 98, will often reduce the temperature, and such baths may be continued for from fifteen minutes to an hour

Dr J M G Carter, Waukegan, Ill —According to statistics, there are five hundred and sixty-one deaths per million due to bronchial affections in the city, to one hundred and sixty-five per million in the country Among the Indians there are only ten deaths per thousand attributable to bronchitis, while among the whites there are about twenty-eight per thousand This I think, goes to show that exposure does not play a very important rôle in its causation

Dr I N Love, St Louis, Mo —I believe generally that small doses of antipyretics are sufficient I think it very important that proper terms for the various lung affections should be used, otherwise it renders all statistics valueless No doubt there are many cases of masked pneumonia which are never diagnosed as such I do approve of the use of the bath The hot bath should never be given for convulsions, nor should the cold bath be used in the treatment of pneumonia

Dr F S Parsons, Northampton, Mass —I have never succeeded in getting a second dose of cinchonidia down a child In croupous pneumonia I have relied more upon the brandy treatment, with very small doses of digitalis I use acetanelid in very small doses, which I believe acts better upon the skin than large doses

Dr J A Larrabee, Louisville, Ky —Where we have a full right ventricle I do not believe digitalis should be given I am in favor of the warm bath In bronchitis I have had good results from vapor inhalations, they will do more good than all the expectorants put together Teething, I believe, in a way, predisposes to bronchitis I certainly believe that hot applications are far more efficacious than cotton jackets

Dr Townsend, in discussing Dr Thrasher's paper, was of the opinion that if cleanliness and a proper diet were looked after, little trouble would occur during dentition

Dr A Foster of Chicago, in discussing the same paper, laid stress upon the importance of discriminating between the effects of teething and the results of improper feeding He also thought there was a reflex condition existing between the cutting of teeth and the stomach, as well as there is between the uterus and the stomach, and was not of the opinion that all the trouble arising during dentition was due to the stomach alone The canines are more apt to cause trouble than any of the other teeth He did not agree with Dr Thrasher that mothers as a rule do not prefer to nurse their children

Dr Christopher of Chicago, was strongly opposed to attributing the various ills of the child during dentition to cutting of teeth, and believed that most of its affections are due to other causes It is true that in most bottle fed babies the nutrition is not up to par and the state of its tissues is not normal, and I believe that such children are affected by slight things, and in such the cutting of the teeth may cause trouble

In discussing Dr J Schneck's paper, Dr Work approved of the treatment therein stated

THE CURABILITY OF NASO-MUCOSITIS [1]

BY THOS F RUMBOLD, M D

SAN FRANCISCO, CAL

(Continued from page 848)

Part II

The Number and Intervals of Local Applications will vary with the Grades —If the Patient of the First Grade, an Infant, is Properly Treated soon after it has taken cold, the disease will be of very short duration, because the reparative processes are very strong at this age In case the patient is only a few days or weeks old, two or three applications may be required the first day, two on the second day, and one on the third Frequent treatments are necessary, because the secretion forms rapidly and requires removal as soon as it is formed Patients from one to twelve months of age will require daily treatments at first for from three to ten days, and then two or three weeks' treatment given every other day, making in all from nine to nineteen local applications Those from one to two years of age will require daily treatments for from three to ten days, and then for from three to six weeks' additional treatment given every other day, making from twelve to twenty eight local applications altogether Relief follows the first application, and recovery takes place at the completion of these courses

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[1] The term, naso mucositis " is formed from the word mucosa the mucous membrane with the usual termination *itis*, ' that indicates its inflammation, and the prefix naso which limits the inflammation to the nasal passage

Patients of the Second Grade—*Young Children* will require daily local applications for from five to ten days, every other day for from two to four weeks, twice a week for three weeks, once a week for five weeks, making from twenty two to thirty-three in all

This completes their *first course* of treatment, and occupies from eleven to thirteen weeks All disagreeable symptoms will disappear during the second or third week

Patients of the Third Grade—*Youths*, will require daily treatments until the purulent character of the nasal secretion disappears, which is usually from two to three weeks, then local treatments every other day for about four or five weeks, then twice a week for four weeks, and then once a week for five weeks, making in all, from thirty-nine to forty-nine treatments for their *first course*, occupying from fifteen to seventeen weeks Relief follows the first treatment and all disagreeable symptoms should disappear permanently from the third to the fourth week

Patients of the Fourth Grade,—*Adults*, will require a *first course* of daily treatments for from three to four weeks, then five or six weeks three times a week, then about five weeks twice a week, and once a week for six weeks, making, in all, from fifty two to sixty-two treatments All unfavorable symptoms should be relieved during the first few weeks

If the naso-mucositis is complicated with any of the following sequelæ ear, throat, or lung trouble, enlargement of the turbinate processes, deviated septum, pruritic naso-mucositis (hay-fever), asthma, epilepsy, chorea, paralysis agitans of the muscles of the face, neck, or ears (*tinnitus aurium*), mental disability, commonly called "neurasthenia," "nervous prostration," from mental over-work, these local applications and the constitutional treatment will have to be continued for a longer period of time, the length of which will be governed by the peculiarities of each case

Patients of this grade will require spring and fall courses of from eight to ten local applications each, for from three to five years About seven in every ten of those over thirty-five years of age will require these supplementary treatments from but two to five years longer, that is from five to nine years in all

Patients of the Fifth Grade,—*Those over Forty Years of Age*, will require about the same number of local treatments, for their *first course*, as those given to the fourth grade Those under fifty-five years of age will require from ten to fifteen treatments every spring and fall for seven to ten years, while those who are older will require from fifteen to twenty treatments every spring and fall during life, to maintain their mucous membrane in such a semi-normal condition that they will not complain I have known, however, a large number of patients over fifty-five to pass one, two, or more years without requiring local treatments

Concerning Supplementary Courses—Experience has proved, thousands of times, that the younger the patient the less extensive and less permanent the changes due to inflammation, and at the same time, the stronger and more rapid the recuperative powers For these reasons they will require a less number of supplementary treatments As has been stated infants rarely require supplementary treatments

Some children, patients of the second grade, may require from four to six supplementary treatments at the next change of the season, that is, the spring and fall following their first course Also some patients of the third grade may require from five to eight supplementary treatments during each spring and fall course for two or three years The dates of the supplementary spring and fall courses are from March 15, to May 15, and from September 15, to November 15

Why Supplementary Courses are Required—The patients that I have described as requiring spring and fall local treatments, are those who can not fully recover from the effects of the chronic inflammation at the completion of their first course of treatment It should not be expected that the blood vessels of the mucous membrane and of the submucous tissues, which have become enlarged to twenty or forty times their normal diameter, would be reduced the nineteen or thirty-nine diameters with only a few months' local treatment Even looking at the mucous membrane alone, it is still in an atonic condition at the end of such a period, although the inflammation is greatly reduced, consequently it must be allowed to remain in an uninflamed state for some time, longer or shorter, according to the age of the patient, before complete recovery can take place It must, at least, so remain long enough to regain its normal resisting power, until its blood vessels and nerves have returned to nearly their normal condition

Supplementary courses, extending over several years, are required to maintain the still partially inflamed, therefore over-secreting, surfaces in a clean condition The secretion from the inflamed surfaces, which is always acrid, assists in maintaining the disease, and if this is not removed when it forms in the spring and fall, complete recovery can not take place Until all this reparation has taken place, the membrane is in a weakened condition, consequently, it is liable to be injuriously affected by exposures to excessive variations of temperature, barometric and hygrometric changes, or even a debilitated condition of the stomach Healthy mucous membrane is not especially affected injuriously by any of these agencies It should be constantly kept in mind that when a cold is taken by a person whose nasal passages are in a healthy condition, his nasal mucous membrane is *not* particularly affected, it is his whole body that suffers On the other hand, if the victim of naso-mucositis takes cold his nasal passages alone seem to be affected Although this is not strictly true, yet he complains as though these passages alone were affected, and they are chiefly affected only because the mucous membrane is in a weakened condition If one's arm is fractured, he is, on this account, liable to take a cold in it if he exposes himself When the injured arm has partially recovered then it is only partially liable to take cold, and the liability to take cold lessens as he progresses toward recovery So it is with the nasal mucous membrane Thus it is seen that *time* is an essential element in the recovery of all cases of naso-mucositic inflammation in patients over twenty years of age

The older the patient, the greater and more permanent the tissue changes brought about by the chronic inflammation, and at the same time the weaker and slower the reparative processes For these reasons, in such cases, a far greater number of supplementary treatments must be given Take two persons of the same age in either of the grades, over twenty years of age, one with a simple nasal inflammation, the other with it of so severe a character as to affect the ears or eyes, or to cause symptoms of neurasthenia,[5] or to produce an epilepsy, or chorea, or such like, it is self-evident that the former case will require a much shorter *first course* of treatments, and shorter *supplementary courses*, than the latter one, where the inflammation is so severe as to affect parts of the head at so great a distance from the nasal passages The secondary ailment can be relieved only by the reparative processes of nature, after the original nasal trouble is subdued to a great extent I do not remember to have had a patient who did not say that each of the supplementary courses was as relieving as the first course of treatment They always gave even greater immunity from colds, because the mucous membrane is more nearly in its normal condition

If the spring and fall courses are not taken, the inflammation will slowly but surely resume its former severity, and then from that time it will continue to increase just as though no local or constitutional treatment had ever been given Under these circumstances, it would have been far better if patients omitting such courses had not commenced to take treatment Their time and money would not have been wasted, nor would the reputation of the physician have been injured by unavailing complaints of not being cured

No Disease more Amenable to Hygienic and Therapeutic Management than Naso-Mucositis—In the case of any patient not over fifty-five years of age, who attends to his various daily duties, whose appetite, digestion and sleep are good enough to maintain passable health, it will be the fault of either the physician or of the patient if he is not cured A cure must follow if the following conditions are fulfilled, viz 1, obedience to hygienic precepts involving the discontinuance of habits that are the cause of the disease, 2, proper medical treatment, continued for a sufficient length of time, by which the inflamed surfaces are kept free from all irritating secretion, and have applied to them perfectly *non-irritating medicaments* by perfectly *non-irritating means*

There are Several Very Good Reasons why Persons are not cured of Naso-Mucositis—In the *first* place, they are unconscious of living in constant violation of the laws of health, or 2, they do not have the least conception that their disease is solely the result of these violations, or 3, they do not realize that they are so seriously, or are so permanently affected, or 4, they received improper medical treatment, or 5, they cease proper treatment too soon

Most Cases of Nasal Disease are Attributable to Ignorance—Let us commence with the youngest sufferer Is the mother unable to properly protect her babe when she takes it for a healthful out door walk? *No* Is she unable to make a cap to protect its tender, hairless head from being injured by even an indoor temperature that is 20 or 30 degrees colder than its body? *No* Then why does she not prevent it from becoming a victim of this disease? The only answer that can be given to this question, is, that she is entirely unconscious of any omission in the care of her child, and has not the least conception that the slightest harm will result because its head is not protected by a cap The heads of all hairless infants that she has seen are allowed to remain uncovered, and *for that reason alone* her child's head goes uncovered while in the house In Europe the heads of all infants are covered with caps, day and night, in this country the heads are not covered day or night

The mother does not know that the "snuffles," to her a very trifling matter, because so exceedingly common, is the result of quite a number of colds, owing to the same number of undue exposures She has not been informed that colds thus taken prepare her child's mucous membrane to take other colds more easily and more severely on subsequent exposure, and that repetitions of exposure and consequent colds are positively certain to end in serious disease of its nasal passages, ears, lungs, or several of its organs at the same time This is the modus operandi of preparing the patients of the first and second grades It is seen at once that success in curing such patients will depend, not so much on applications or remedies, as on the successful education of the parents, so that they will know how to prevent the continuous irritations from colds If successful in this respect, cure is certain to follow Not only that, but I believe that three-fourths of these cases—of course uncomplicated ones—will recover without medication of any kind, provided proper care is taken of them I say this to indicate my estimation of the great value of hygienic measures

We have already seen how the third grade patients are prepared for the rhinologists, through exposure and improper dressing permitted ignorantly, by their parents In the common matters of every-day life there is not a greater display of woeful ignorance, almost criminal, than is here shown It is ignorance as well as carelessness and viciousness, that has brought on naso-mucositic disease upon patients of the fourth and fifth grades If excesses *must* be indulged, evil consequences *will* follow and must be endured, *for nature's laws would have to be changed before they could be cured by any method of treatment* Many patients fail of cure through imperfect treatment, either owing to not having the right method applied to their cases, or not fully availing themselves of it

Partial Treatment—There are quite a number of persons who received proper treatment for several months, almost long enough to complete their *first course*, but do not entirely discontinue those habits and customs that aggravate the disease, such as the indulgence in tobacco and stimulants, and other forms of dissipation, the improper use of clothing, such as low-necked and short-sleeved dresses, attending operas at night, then eating, wine suppers, etc Such patients fail to appreciate the importance of hygienic measures, and only observe them while under great anxiety from the debilitating influence of the disease It is seen that they expect this disease to be cured by medicine alone Customs, habits and dress are not inquired into by them, local symptoms alone absorb the attention Their not being cured quickly engenders a fear that they will not be cured at all Some will be dissatisfied if they are not completely cured in a few months at the farthest, and this result must be effected without entailing any trouble on their part, as well as without interfering in the least with their usual course of life, especially if this course has been for years in gross violation of the laws of health

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[5] Dr Beard's name for the late popular complaint known as "nervous prostration" from over work of a mental character

Almost all patients experience marked relief on receiving local applications during the first three or four weeks, after this a small percentage of them will say that the treatment seems to be less efficacious than formerly As quite a number of them have tried remedies that afforded relief at first, they begin to suspect that this also will result in failure These reports come from patients who have experienced but little pain or discomfort of any kind Upon questioning them, it will be found that during the first few weeks of treatment all unpleasant symptoms slowly and imperceptibly passed away, and were completely forgotten Upon this discovery, and relating to them the sensations that they gave when they commenced treatment, they are entirely satisfied, although a great many will hardly believe the physician when he recounts their symptoms upon their first visits It is remarkable how quickly their disagreeable sensations pass out of mind until shown a record of them

Advice Regarding the Avoidance of Colds —Many times patients, especially those of the fourth grade say "All this advice with regard to being careful not to take cold is well enough to almost any one but myself, I take cold almost constantly, even when I am doing my utmost to prevent it I do not know how I take cold, I don't think it is any fault of mine What is the use of advising me to do something I can't do?"

The answer is this a mucous membrane that is greatly inflamed, as is this patient's, is one that is remarkably sensitive to attacks of cold A slight draft of air, even walking in a cool hall, going into a cold bed, or a slightly disordered condition of the stomach, will be sufficient to produce manifestations of a cold But, to repeat, *it is so with those only who have had severe chronic naso-mucositis for many years* Still the advice is proper to persons thus susceptible They will find that, as the treatment reduces the inflammation, care will be successful in warding off colds, as it is only the excessively inflamed mucous membrane that takes cold so easily The more successful they are in preventing colds, the more quickly they will be cured and the more certain they may be that they are making permanent improvement

Colds Resulting from Debility Occasioned by Indigestion —There is another apparent cause of colds, and it is one of the very greatest importance, it is in regard to the proper kind of food Patients who have for years had a stream of muco-purulent secretion passing incessantly from the pharyngo-nasal cavity down through the esophagus into the stomach, have in this way slowly produced indigestion, that is slowly weakened the mucous membrane of the stomach by the continued presence of the nasal secretion This secretion is always acrid, therefore irritating, not only this, but it is really a substance that will assist in bringing about a fermentation of the food Thus it is that many persons who have a good appetite have poor digestion and, as a consequence, are but poorly nourished The reasons for this are two-fold one, as has been stated, the mucous membrane of the stomach is weakened, the other, the whole contents of the stomach and bowels have undergone a peculiar species of fermentation, started by the fermented nasal secretion Evidences of the fermented condition of the alvine discharges are the excessive and peculiarly disagreeable odor of the stools, and the uniform high color of the urine, etc, showing that all the organs concerned in digestion and excretion are injuriously affected, and as a consequence, the nutrition of the whole body must necessarily suffer In the large majority of instances the weakened stomach will not as completely digest animal food as it did in former years, but it will almost always digest vegetable food If such is the case, and the patient can easily prove this for himself, if he is observant, then he should govern his diet accordingly It looks a little strange that a hearty repast of roast beef, taken at a night meal, will frequently result in an increase of one's cold the next day, but I am certain, from many observations, that such is the case

Taking Cold Frequently —"It seems to me that I take cold more frequently than before treatment" If this is the case, then the patient may be slightly over-treated Over-treatment, of course, means increase of irritation instead of the decrease, which is essential to recovery The remedy is easy In the majority of instances the remark comes from patients who have made but slight observations upon their own condition, until they came under the care of the physician In a few weeks they will find that they were mistaken, as by this time they will observe the reverse to be the case, that is, that they take cold less easily than before they took treatment Decrease of inflammation and decrease of cold-taking always go together

Evidences of Improvement —It is the relief of the acute inflammation, which nearly always occasions marked discomfort, that is plainly observed by the patient, the subsidence of the chronic form is not accompanied by marked relief, unless the patient compares his present condition with that of several weeks or months previous Many of these patients continue under treatment for three or four weeks, entirely on their confidence on the physician, so little do they observe any change A very common feature of their condition, which is not usually noticed by these patients until their attention is called to it, is the fact that they do not take cold as frequently and severely as formerly This they should consider as the very best evidence that they are making permanent improvement If they are not taking cold as frequently as formerly, it is because the treatment is relieving the diseased surface of its chronic inflammation and the membrane is becoming stronger This is the opposite of their condition before they took treatment, then, they took cold even without an opportunity, now, they do not take cold until they are unusually exposed—*a marked contrast* This contrast should be brought forcibly to the patient's attention

Regardless of the Laws of Health —Frequently patients, who live regardless of the laws of health, unconsciously or purposely conceal the truth to avoid a merited censure for their reprehensible conduct, and wish to make it appear as if it was the physician's fault alone that improvement did not continue until they recovered The relapse to the former state of ill health is but a consequence of the relapse to their former habits and customs of life

It is evident that if they had not continued to contract the disease, that is, by being indifferent to taking colds and using tobacco and stimulants, they would have continued to improve until complete recovery had taken place, for if they improved when their health was seriously impaired by the nasal complaint, and the inflammation was in its severest form, it seems natural to suppose that after their systems had markedly recovered from the debilitating influence of the disease, they would have continued to improve if the same hygienic and therapeutic measures had been continued, although the improvement would not have been so rapid as at first, as has been explained

On partial recovery they return to their usual mode of life without any restraint, and of course their nasal trouble ceases to improve This arrest of improvement and the annoyance they experience in denying themselves of their disease-producing habits, cause them to discontinue treatment

If asked by their friends concerning their nasal complaint, they reply that they were conscious of marked improvement at the early part of the treatment, but after a few weeks, while not as ill as at the commencement, the improvement did not continue as rapidly as at first, and for that reason they discontinued their visits to the physician After a few months they will relapse into their former state of ill health

(*To be Continued*)

HERNIA IN CHILDREN

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

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Hernia being a very disabling affection to a relatively large per cent of the human family, and the frequent cause of death both in adults and children, is sufficient reason for its being considered here to day

Frequency and Varieties —I have mentioned that it affects a comparatively large per cent of mankind It has been variously estimated that the affection is found in from one eighth to one-sixteenth of the entire population About one death occurring in every six hundred is due to hernia Almost every aperture leading directly or indirectly to the abdominal cavity is liable more or less frequently to become the point of exit of a hernia In the order of frequency of occurrence they may be named as follows inguinal, umbilical, femoral, ventral, obturator, ischiatic, perineal, diaphragmatic, and a few other rare forms

For every ventral hernia there are about four femoral, five umbilical and sixty-two inguinal herniæ

At the Hospital for Ruptured and Crippled, New York City, there were treated during the five years from September, 1887 to September, 1892, 19,756 cases of hernia, or about 4,000 per year The relative frequency of the different forms are as follows

	No Cases	Male	Female	Under 14 yrs	Right	Left	Double
Inguinal	16 864	14,994	1,870	4,348	7,806	4,375	4 686
Umbilical	1 488	569	919	789			
Femoral	1 135	418	717	26	700	379	56*
Ventral	269	95	174	13			
Total	19 756	16 076	3 680	5 176	8,506	4,754	

*These 56 double femoral hernia cases only cover the reports of 474 femoral cases Report for 1891 and 1892

Sex, Age, etc —Hernia in general is found much more commonly in males than in females Of the above 19,756 cases, 16,076 were males and 3,680 were females, or about four and one third times as many males as females Of the inguinal variety of hernia, which includes the great bulk of the cases, there were 16,864 cases, of which number 14,994 were males and 1,870 were females, or about eight times as many males as females

Umbilical hernia is found more frequently in females than males, nearly in the proportion of two to one, and over half the cases are seen in children Femoral hernia is also found more frequently in females than males, but is rarely seen in children, only 5 cases a year noted out of 4,000 cases examined Of the total number of cases of all kinds treated in five years, 19,756, there were 5,176 children under fourteen years of age, or a little over one-fourth of the whole number

Etiologic Factors —It has been noted that climate and the condition of the patient are factors bearing on the relative frequency of the affection Of countries, Spain and Portugal have the highest per cent of ruptures per population, and the countries of South America the lowest Of the States of the Union, Minnesota has the highest average and West Virginia the lowest Physical condition of the patient has a marked bearing on the subject Children weakened or debilitated by disease are more liable to the affection than the rugged, and having the hernia, it is harder to retain in place when the child's general health is weakened by any cause whatsoever

The passage of the spermatic cord and vessels through the inguinal canal has always been recognized as the prime causation factor in the production of inguinal hernia and need not be discussed Umbilical hernia may be congenital or acquired Of the congenital variety, arrest of development of the abdominal walls is a frequent cause Dr James R Chadwick of Boston, suggests another cause We know that the intestines are developed outside the abdomen Should their volume be too great to be readily inclosed by the undersized abdominal walls, at the time when the abdomen should be normally inclosed, the umbilical vesical should it fail to have atrophied, acts by means of its duct to keep part of the intestines without the abdomen and thus to form a hernia Dr Chadwick demonstrated his views by several dissections, other cases have been reported which favor this idea The umbilical aperture is ordinarily patent at birth and is therefore a naturally weak point Dr Edward Swasey, in reporting 500 cases of hernia in children observed at the Hospital for Ruptured and Crippled, noting that female children are more liable to umbilical hernia than male, suggests that it is probably due to the relatively larger funis in the female child He further attributes the greater frequency of right inguinal hernia than left, to the weight of the liver pushing the intestines on the right side down into the funicular process The region at and about the umbilicus being naturally weak, the acquired form in children is brought about by crying, coughing, straining at stool and the like Femoral hernia is rarely seen in children, and the etiologic factors acting, in the comparatively few cases observed, are not marked, or, at least, have not been well made out Ventral hernia is usually seen in feeble and delicate children, and especially when the muscular system is poorly developed The usual contents of a hernia in a child is intestine or omentum, though rarely an ovary, uterus, kidney, or a part of the bladder has been found

Treatment —The treatment of hernia in children can be classed under these heads 1, general treatment, 2, mechanical support, 3, operative measures

1 *General Treatment* —If possible, the attending physician should obtain knowledge as to the circumstances under which the hernia first appeared and this active causation factor should be removed Suppose that it first appeared during a fit of vomiting, and from thence, after each meal, the child is sick and the hernia appears In such a case the feeding of the child is of paramount importance Should the hernia come down during fits of coughing, treatment for the cough comes first Violent explosive efforts must be checked before the hernia can be cured

Recently I was called in consultation to see a child, with a large right inguinal hernia The child was suffering from whooping cough, so that nothing very effective could be done till the cough was cured An elongated uvula might be the cause of vomiting or coughing A rectal polypus or chronic diarrhea may cause a hernia or prevent its permanent cure by compelling the child to strain at stool Relief of these conditions should be looked after Should the hernia appear during micturition, see that the preputial and urethral orifices are free Possibly the child is suffering from a calculus If the child is emaciated and its muscular system poorly developed, tonics, cod-liver oil, good food, out-door exercise, and sunshine are eminently in order

2 *Mechanical Treatment* —At the Hospital for Ruptured and Crippled, New York City, where the writer was formerly House Surgeon, they treat on an average about four thousand patients a year having ruptures The general plan of treatment, at that institution in all reducible cases, except umbilical and ventral, is support by means of a steel spring truss, using pressure as light as consistent with the effective control of the hernia This truss which I show you, known as the "Knight" truss, is the support generally employed It is easy of application and is quite inexpensive It differs from those usually sold at the shops in that it is an "opposite side" truss, i e, it passes in front of the pelvis to the rupture, from the opposite side of body It passes three-fourths around the body and the circumference is completed by means of a strap The spring is made of imported steel, tempered to a point which permits it to be shaped to the contour of the body The steel band is covered with rubber tubing, and at the end is a shank at right angles to the band, to which is attached a soft wood pad, one and one-half to two inches in diameter covered with chamois skin The spiral spring truss is used some, also the Seeley and the Penfield celluloid, but the latter are not so efficient in the severer forms of hernia In those cases that are quite difficult to hold, the "Hood" truss is used This is a very neat and comfortable truss, but is too expensive for clinical purposes In over three-fourths of the cases the "Knight" truss is found quite efficient, and this combined with its cheapness makes it the truss par excellence Dr S E Milliken, formerly Assistant Surgeon to the Hospital, devised a truss to hold the comparatively few that could not be held by the above named trusses It is a combination of the Knight and Hood trusses, and is quite efficient, even in nearly all the worse cases

Umbilical herniæ in children are treated by means of a small pad or wooden button held in place by strips of rubber adhesive plaster The plaster need not be changed oftener than once in ten days unless excoriations are produced A large per cent of the cases of umbilical hernia in children are cured by this method

Femoral hernia exists so rarely in children and is so easily held that little need be said of this form The Spiral spring and the Knight truss will usually answer the purpose Let me here say that it is not sufficient, on making the diagnosis of rupture to send them to an instrument maker, leaving the whole after-treatment to his judgment The physician should fit the truss or at least see that it is done properly An ill fitting truss is worse than none at all A child I recently saw, where the fitting had been done by one of the quack "truss specialists" had, as the result of a badly fitting truss, an ulcer of quite severe grade at the point of pressure The pressure should be light as possible, consistent with security, and should be over the internal ring As it is much more difficult to fit and control a rupture in a child than in an adult, therefore special directions should be given to the parents—the need of always having the pad in place, that the child should never be without the truss, that the parts be kept clean to prevent excoriations, in fact, the more explicit the instructions the more apt they are to be carried out

RESULTS OF MECHANICAL TREATMENT

Dr W B DeGarmo of New York, gave the results of mechanical treatment of hernia (*New York Medical Journal*, March 3, 1888, p 236–7) in one thousand cases in private practice, over one-fourth of the entire number were dismissed as cured, i e, one-fourth having remained so for over six months without support, one third were improved, i e, were able to wear a lighter truss than at commencement of treatment and with comfort About twelve per cent of Dr DeGarmo's cases were under five years of age He believes that a large per cent of herniæ occurring before middle age can be cured by early mechanical support

Dr W T Bull of New York, takes a moderately conservative view of mechanical treatment He believes that "a certain number of favorable cases, especially in children and young adults are cured, and permanently so, by wearing a truss for a longer or shorter term," but what the proportion is that are so cured he is unwilling to estimate He further states that "a larger number of cases are found in which the hernia is perfectly controlled by a truss with but slight, if any, inconvenience to the wearer But there remains another class of cases in which the truss fails to hold completely, on account of adherent or irreducible omentum—298 such cases were observed at the Hospital for Ruptured and Crippled in a single year, of which 93 were in women and children "

3 Operative Measures —The question that first suggests itself to us is, What cases shall be reserved for operative treatment? All agree that operation is required in strangulated and irreducible hernia, further than this there is considerable difference of opinion It would appear that Mr Spanton, an Englishman, would have us operate for radical cure in a large per cent of cases Marcy of Boston, in his recent work, "Anatomy and Surgical Treatment of Hernia," page 378, quotes Mr Spanton as saying "If it is possible to effect the cure of rupture early in life (thereby eliminating at once one eighth of the whole number of cases) by an operation which is both safe and efficient, we are led to inquire in the words of Sir Spencer Wells, "Whether it may not be better to operate even on young children than to expose them for several years to the inconvenience of a truss, with the possibility that, after all, a radical cure may not be obtained " Dr Marcy's comments on the above are ' The knowledge and adoption of antiseptic operative measures which have become general since the date of Mr Spanton's writing, (International Medical Congress, 1881) gives yet more force to his earnest plea in behalf of a large class of helpless sufferers If by mechanical means we can not effect a cure, it is our duty to operate " Dr W T Bull of New York, classifies those requiring operation as follows "1, cases of adherent omentum, 2, cases of hernia complicated with reducible hydrocele, 3, cases of irreducible and strangulated hernia

"With certain surgeons of high authority we may add another class, viz all cases which from various reasons are unable to command the large amount of care requisite for successful mechanical treatment "

Leaving the subject of strangulated hernia and taxis to those who are to discuss this paper, I desire to make the following comments on the subject of the operation for radical cure the operation should be done under the strictest possible antiseptic precautions Great care should be taken in the dissecting out of the sac, also in the separation and handling of the spermatic cord It is usually best to open the sac and examine its contents The sac should be tied off well down in the wound, the external portion removed and the stump returned into the abdominal cavity The aim should then be to reform the inguinal canal to as nearly its normal length as possible The deeper parts should then be brought together by buried sutures and the skin wound according to the method described by Marcy The wound being dressed antiseptically, over all should be applied a plaster-of-paris spica from the ankle to the umbilicus Dr Wm B Coley of New York, has been using the plaster-of-paris covering during the past year at the Hospital for Ruptured and Crippled, with excellent results, and he attributes the quick healing to the absolute rest which it imposes on the parts The casing is left on for eight days when the wound is dressed for the first time

Results of Operative Measures —Heaton's method of injecting quercus alba is so almost universally a failure to cure permanently, that it is pretty generally given up I have seen it used in a number of cases with failure in about all

Of sixteen cutting operations for radical cure performed at Hospital for Ruptured and Crippled in 1889 and 1890, during my service, six relapsed the first year and two others later Part were by the Socin and part the Czerny methods Dr Coley of New York, reports forty cases of operations on children during 1891–92 by the Bassini method Of these forty cases, but one has relapsed and in this case there was prolonged suppuration Bassini has reported 262 operations by his method with one death Of these, 247 operations were traced, 47 were without relapse after two years, and 108 had no recurrence for periods varying from one to four and one half years after the operation

Championnière reports 275 cases with 2 deaths 112 have been kept under observation, 30 have gone 2 years without relapse and 11 have remained solid for 4 years and over

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PHIMOSIS, A PLEA FOR ITS RELIEF BY EARLY OPERATION

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY J A HOFHEIMER, M D

NEW YORK N Y

The subject of this paper is as old as medicine itself, my attention, however, within the past few years has especially been called to various ailments of infancy and childhood, which may have been directly attributed to phimosis In many of the cases this condition had been overlooked by physicians previously in attendance In some of the cases attended by the writer from their birth, phimosis had been the last thing considered, but a relief of this malformation would always bring about an amelioration of the various symptoms, and in most cases an absolute cure

In advising an operation for phimosis it is not my object to indorse circumcision as done according to the rites of certain oriental religions, but to perform an operation based strictly on anatomic and physiologic data

The main purpose of the prepuce is to act as a protection to the sensitive glans penis, and to entirely remove this leaves a very delicate organ open to considerable local irritation This condition, to my mind, is almost as bad as the original one for which the operation was performed—often being the prime cause of masturbation and kindred ills

A point in operating to be strictly observed, and which is noted in most works on surgery, is always to enlarge the upper border of the preputial orifice by a small "V"-shaped incision (or excision), so that the prepuce may easily be retracted back of the corona of the glans penis This insures cleanliness and abundant opportunity to prevent accumulation of smegma

The steps and technique of this operation are laid down amply in works of surgery Two rules have been followed in my recent operations Never to use cocain anesthesia, for whenever it has been used primary union was not obtained, and to always use the interrupted suture, as it holds the parts in better apposition than the continuous does

The history and symptoms of phimosis vary considerably It may be acquired or congenital, in the present instances the latter condition is found It is to call your attention to the variety of sequelæ, and to further urge my plea for an early operation, that the following cases are quoted briefly from my notes

Case 1—John L, age 2 months Had suffered from incontinence of urine almost since birth The patient was under medical treatment with no good result When the child was first seen the prepuce was over an inch longer than necessary to cover the glans The glans was purplish in color, the meatus swollen and irritated, and the entire interior of the prepuce was moist Operation was done under chloroform anesthesia At present writing the patient is 5 years old, and no sign of operative measures can be detected, the foreskin can be easily retracted, and when pushed forward it covers the glans almost to the tip, leaving a free opening for the meatus, with no chance for dribbling of urine into the prepuce Urinary incontinence ceased from day of operation without further treatment

Case 2—Harry R, age 4 months Since birth patient had had to strain when urinating No physician had been consulted about his case until seen by the writer The end of the penis looked like a toy balloon, and inquiry elicited the statement that it had "often looked like that, but always got well" The prepuce was elongated and its orifice was so small that it became easily agglutinated together, thus forming a sac into which the child urinated The infant was suffering intensely, and the penis was much swollen A puncture at the site of the preputial orifice allowed the accumulated urine to escape, and the following day an operation was performed with favorable results

Case 3—John McL, age 2½ months Had been peevish and fretful since birth, he seemed to be wasting away Every time he urinated there would be a small evacuation from the bowels Occasionally for twenty-four hours there would be retention of urine Examination showed the meatus to be very much contracted by the adhesions of the preputial membrane to the entire glans, some fibrous bands crossing the meatus The two parts had become so closely agglutinated that the adhesions could not be separated by traction as in most cases, but it became necessary to do a delicate dissection with a scalpel After operation the patient gained in flesh was less peevish, retention of urine ceased and bowels became regular without further treatment

Case 4—Milton S, age 2 months This child also had fecal discharges whenever he urinated He always strained so forcibly when urinating that the attention of the family physician was called to the matter Finding the prepuce elongated and contracted, he made a dorsal slit when the infant was about three weeks old The child improved for a few weeks, when the old trouble again manifested itself The patient when first seen by the writer, had the appearance of a case in advanced stages of marasmus The dorsal incision had caused a cicatricial contraction of the prepuce, and the orifice, instead of being directly opposite the penile meatus, was above it and over the top of the glans, thus causing the child to urinate into a pouch which was never completely emptied, and which when filled would allow the urine to escape slowly through the dorsal slit This undoubtedly kept up a constant irritation and caused the patient's fretfulness and sleeplessness The frenum was ulcerated from prolonged contact with the decomposing urine Operation was successfully performed, and the child—now 9 months old—is stout and healthy

Case 5—Arthur K, age 5 months He suffered from constipation almost since birth, and occasional retention of urine Otherwise seems healthy and very fat I had tried with only temporary benefit to relieve his constipation by laxative foods and remedies The father called my attention one day to the child's prepuce, asking me if it was 'natural to be so long?" Examination showed it about one and one half inches longer than was necessary, and also several adhesions to the glans An operation was advised, and to oblige the parents cocain anesthesia was used Thirty minims of a 4 per cent solution was injected hypodermatically and applied externally Before more than two or three stitches were passed the effects of the drug wore off, and the child became restless and evidently suffered so much pain that no more stitches were inserted, and the parts were allowed to granulate The bowels acted well the next day without medicine, and urine was passed in larger quantity The mother was instructed to pull the foreskin back of the corona two or three times daily to avoid cicatricial contraction This she did for about a week, and thinking everything was going well she desisted A couple of weeks later—about one month after operation—the child was brought to my office with the old complaint of constipation The preputial orifice was found so contracted that it could not be pushed back of the corona Dilatation was practiced daily by means of introducing a pair of forceps and opening them as far as possible without causing too much pain to the patient, thus stretching the cicatricial tissue This worked admirably, and now, for some nine months after the operation, the child's bowels have acted regularly without physic

To further illustrate the influence that phimosis has on the nervous system, brief mention of two adult cases selected from my notes may not be amiss

Case 1—The first is that of a young man, age 18 years, since infancy an epileptic, having from one to three attacks weekly After an operation for the relief of his phimosis the attacks became less frequent—sometimes only one in two or three months Four years have elapsed since the operation and his condition continues to improve

Case 2—Is that of an adult 35 years old, who had complained of an intense pruritus scroti et perinei for over a year—the parts were badly excoriated, due to the patient's scratching A pronounced phimosis was found, and an operation for its relief was followed by a complete recovery This latter case opens a new field of thought Though married for several years, his union had been fruitless, within three months after the operation his wife became pregnant Whether his phimosis interfered with the proper ejaculation of the seminal fluid is more than the writer would venture to assert

While well aware that the majority of authors have stated that as the child grows to puberty the penile organ enlarges, the prepuce contracts, and as priapisms occur the adhesions to the glans will be severed, yet experience has taught me differently For every adult I have operated upon has presented very firm adhesions which in many cases required cutting to loosen, while in infants the adhesions were with one exception easily separated with the fingers, leaving no bleeding surfaces

If the elongated prepuce is the source of trouble why should we wait too long before operating? While we are dallying with the case the child becomes more fretful, nervous and sleepless, and cases are recorded where chorea has developed from this cause

An early operation for the removal of the redundant prepuce—allowing only for proper covering of the glans, yet permitting easy retraction for cleanliness—will relieve the child of a great source of irritation, and indirectly improve nutrition, changing a fretful, puny baby into a thriving, happy infant

THE IMPORTANCE OF EARLY EFFECTIVE ELIMINATION IN THE ZYMOTIC DISEASES OF CHILDREN

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY J A WORK, M D

ELKHART IND

The physician who has the ambition to keep pace with the advance of his chosen profession, and learns with delightful anticipations the most approved and modern remedy for the special disease in question—with its therapeutical application in detail—will in a great measure fail of the desired end, if he loses sight of the very important fact, that he has a system—a body of many members—to treat as well as a disease to combat A system already in a pathologic condition, and was so, as, in a majority of cases, even prior to the inception of the specific zymotic poison.

When we are interrogated, why all children equally exposed to a certain contagion, do not contract the same? we answer that those who are not affected are in good habit of system, their blood is pure, they are in a healthy condition, by which expressions we mean to say, that the system is in a normal physiologic condition, and thus the poison finds no nidus of effete matter, in fact there is no soil for its propagation.

I recently had a case of scarlatina that illustrates the point in question.

A mother 23 years of age, nursing her child, 20 months of age, the disease had manifested itself thirty-six hours prior to my first visit; tonsillitis severe with much ulceration, eruption complete and fever high. Active elimination at once instituted through all the emunctories, commencing with a dose of castor oil, followed within one and one half hours by a water enema, and as soon as a thorough evacuation was secured, a complete general scrubbing with soap and water, in a very warm room, was given. After patient was put to bed her room and adjacent rooms were thoroughly aired, and throughout the course of the disease the air of the rooms was changed once an hour. We secured an evacuation of the bowels, and had surface of body sponged every twelve hours, as long as fever continued. The disease run a normal course. Patient recovered. The attendant was instructed to allow the *child* to continue to *nurse* the mother, and supply the deficiency by easily digested food. It was to have an evacuation of the bowels twice a day at least, and be sponged once a day. The child did not manifest *even* a symptom of disease. Prompt action as to elimination in case of the mother, was not only a large factor as means of cure to her, but in connection with the care given to child, secured immunity for it.

As it is true, that a system thoroughly cleansed of all effete and residual matter, foreign to a normal physiologic condition, is thus rendered less susceptible to, if not entirely exempt from, the disease in question, is it not the most rational procedure in treating the little patient, as early as possible, to eliminate through all the channels and maintain a normal action of the eliminative organs throughout the entire course of the disease, whatever else by way of medication is necessary to meet all the indications in the case?

I believe that early effective elimination is the most important treatment of all zymotic diseases, and if employed early is, in many cases an abortive means.

It is true that, in a large majority of cases we do not see our patient until the stage of incubation is past, and the disease has manifested itself by the signs peculiar to the specific pathogenic microbes. The genetic soil has been carefully, or rather, carelessly prepared on the part of the attendants, for certainly careless pernicious habits and especially as to ingesta, play an important rôle in preparing the fostering soil necessary to a rapid and copious generation of bacilli. This preparatory pathologic work, favoring the disease, but decidedly detrimental to the physician's success in curing his patient, thus far, has been accomplished without any knowledge on the part of the doctor, and thus he is not responsible, but from thenceforward his responsibility is very apparent. And now the question which engages his careful attention is, Can I not, even at this stage of development, as it were, root up and destroy the growths and remove even their soil, by early effective elimination to the extent of modification, and thus secure, at least, an unaggravated case of the specific disease, which will run within its normal limits to a happy termination?

There are degrees of severity in all so called zymotic diseases, and why is *this* a severe, and *that* a mild case of scarlatina, if you please? Were not both patients equally exposed to the disease germs? We are sure that the difference in severity is not due to a difference in quality of the infectious matter. Is it then due to quantity? Not necessarily so. Both patients were exposed at the same time, and the same length of time. Then the difference in degrees of severity is not in the quality, neither in the quantity of the infectious virus, but is due to the peculiar susceptibility of the patient.

Idiosyncrasy has some bearing as a factor in the matter, but a vitiated, depraved system, due to poor elimination, does more toward the production of *severe* cases in all zymotic diseases, than any other cause. Now if it be true that poor elimination prior to inception, and thus a retention of effete matter, is the most potent cause of the severity in any disease of the class in question, then we rationally conclude, that if the system is clean, aseptic at incubation, and this condition maintained through entire course of disease, we will have a mild form and a very satisfactory result.

By early elimination, we mean, that there should be no delay in arousing the eliminatory organs, not to depletion, but to a full, free, normal activity. And if prophylaxis comes within the scope of this subject I would suggest that, during an epidemic, the physician and his patron advise with each other, so that the earliest indication of the disease be met, and this important preliminary treatment, as it were, commenced before the system reaches a high degree of fermentation.

I am aware that much more could be written on this subject with profit, and it is not within the province of this short fragmentary paper to discuss the therapy of this class of diseases, but brief as this is, if it will elicit a discussion more worthy of the subject, I am content.

300 Division Street.

MENINGOCELE, WITH CASE

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY M. G. SLOAN, M.D.
DEXTER, IOWA.

The occurrence of pure meningocele is doubted by the most of our authorities. Conner says, (Keating's Cyclopedia of Diseases of Children) "If it occur at all, (and this is much doubted) it does so very rarely." Irving C. Rosse, (Reference Handbook of the Medical Sciences,) says: 'The lesion is not yet sufficiently demonstrated to enable one to trace the symptoms, or even the diagnosis; on all sides it is admitted to be very rare, and some even doubt whether it exists."

I think it quite probable that the lesion is not quite so rare as the above quotations would indicate, because it is not an easy matter to certainly diagnose the condition even when present, and I have no doubt that in some instances, where no operation has been performed and no postmortem held, a diagnosis of hydrencephalocele has been made when meningocele really existed. In the case about to be narrated, the lesion was *supposed*, up to the time of operation, to be hydrencephalocele Before the days of aseptic surgery, the results of operation, in this unfortunate class of cases were so discouraging, so almost uniformly fatal, that very few surgeons had the temerity to attempt to do anything looking toward a radical cure

I believe that with the resources at our command to-day, the prospect of success following the removal by the knife of these protrusions, is good, and as a reasonable basis for that belief present the following history of a case of pure meningocele

The patient (female) was born on March 18, 1893, after an easy labor, weight six pounds The mother was a primipara, and was in good health and spirits Immediately after birth I discovered that there was a tumor in the occipital region about the size of a small hen's egg with a pedicle about one inch in diameter, the tumor was covered with apparently normal scalp, and was about as well supplied with hair as was the scalp proper It was slightly reducible on firm and continued pressure, but the child became very uneasy when this was attempted When the child cried the walls of the tumor became very tense, and the veins prominent To the touch it seemed that the growth was divided indistinctly into two lobes of brain tissue surrounded by considerable quantities of liquid. Hence the diagnosis was hydrencephalocele The anterior fontanelle was very large and the forehead abnormally high, indicating the presence of a moderate degree of hydrocephalus The child nursed and slept well, but had gained nothing in weight, at the end of three weeks At this time the tumor was perceptibly larger, measuring six and three fourths inches in circumference At the earnest solicitation of the parents, and after having explained to them the dangers of the operation, on April 13 I undertook the removal of the growth by excision

Twenty-four hours previous to the operation the tumor and scalp in its vicinity were shaved, scrubbed with soap, and then with ether, and finally compresses of absorbent cotton wrung from a 1 4000 solution of corrosive sublimate were applied Operation under chloroform anesthesia, a flap was dissected from the base of the tumor all around and reflected An Esmarch's tourniquet was then tightly *drawn about the pedicle, and the tumor* excised as close to the tourniquet as possible There was no perceptible effect on circulation or respiration, but the child's color was very bad, although this was noticed during the flap dissection, and before the tourniquet was tightened

The contents of the tumor *were entirely liquid* Not a vestige of anything resembling brain tissue was found So that the diagnosis was necessarily changed from hydrencephalocele to meningocele The sac was lined with extensions of dura mater and arachnoid Nothing was found bearing any resemblance to pia mater In spite of the tourniquet there was for a short time slight leakage of serum from within the skull, the opening in which would readily admit the end of my little finger The tourniquet was allowed to remain under antiseptic dressings for twenty-four hours, when it was removed under chloroform anesthesia Much to my disappointment, there was quite a flow of serum on its removal I rapidly united the edges of the dura mater with continuous catgut suture and thus effectually stopped the leakage As an additional safeguard a strong catgut ligature was thrown about the remains of the pedicle above the sutures -The ordinary dressings were put on *The little patient* was in good condition at end of operation, and has progressed steadily and favorably ever since At this writing, May 29, the operation wound is entirely well, with only a slight thickening of the tissues to mark the site of the growth The babe has gained three pounds in weight since the operation, a little more than six weeks

Dec 4, 1893 At this writing the patient is well, weighing about fourteen pounds Only a small hard cicatrix remains to mark the site of operation Mentally she seems about as well developed as the average child of her age

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SELECTIONS

PATHOLOGY OF LARYNGEAL TUBERCULOSIS

An Original Translation from the "Klinischer Atlas der Laryngologie u Rhinologie, of Dr John Schnitzler of Vienna

BY JAMES MOORES BALL, M D

PROFESSOR OF OPHTHALMOLOGY, OTOLOGY AND RHINO LARYNGOLOGY IN KEOKUK MEDICAL COLLEGE KEOKUK IOWA EDITOR OF THE TRI STATE MEDICAL JOURNAL

The late Prof Schnitzler at the time of his death, was engaged in the publication of an Atlas of Laryngology and Rhinology with explanatory text This work presents the latest views extant in German-speaking countries concerning the pathology of laryngeal tuberculosis The following translation, it is hoped, will be of value to the busy practitioner and specialist

TUBERCULOSIS OF THE LARYNX

Tuberculosis belongs to the most frequent and also gravest class of laryngeal diseases, consequently a clear understanding of it is of great importance, and on this account we desire to make this chapter as complete as the limits of the work will permit

Etiology—There can be no question that most of the changes observed in the course of laryngeal tuberculosis are due to an invasion by tubercle bacilli

Furthermore, it is questionable whether many superficial ulcers in the larynx, occurring in the course of a simultaneous pulmonary tuberculosis, are dependent entirely upon the eroding action of the sputa passing over the parts, or upon the influence of pyogenic cocci in the sputa This opinion can not be entirely ignored, since the rapid healing of many such superficial ulcers justly calls in question the tuberculous character of the same

On the other hand, it can not be denied at the present day, that the swellings and ulcerations observed in the course of laryngeal tuberculosis are, in some measure, the result of a secondary infection E Frankel, by means of culture media and stab cultures, has established the frequent occurrence of staphylococcus pyogenes aureus or streptococcus pyogenes

Likewise, Hajek has demonstrated the frequent existence of grape like and chain-like cocci in tubercular ulcers It is probable that the acute edema, which sometimes occurs in the course of tubercular destruction, may depend upon secondary infection

Those perichondritic processes resulting from laryngeal tuberculosis, which can generally be ascribed to a secondary origin, will be mentioned later

With our knowledge of the infective cause, the etiology of laryngeal tuberculosis is by no means exhausted, since the question of greatest importance is in what manner does the bacillus of tubercle reach the laryngeal membrane?

This question, however, is so intimately connected with another, viz, whether laryngeal tuberculosis be a primary or a secondary disease, that the answering of the latter must precede the entire discussion

The preponderating number of cases of laryngeal tuberculosis is associated with pulmonary tuberculosis Generally the tubercular changes commence in the lungs and, later, tuberculosis of the larynx is associated therewith. Often a laryngeal tuberculosis is the last act in the drama of general tuberculosis, and we are correct in saying, as a general rule, that the laryngeal is secondary to the pulmonary tuberculosis.

In like manner we must look upon those cases of laryngeal tuberculosis as secondary, in which tubercular change in the lymphatic glands, or tubercular caries of the joints, precedes the outbreak of laryngeal tuberculosis. Every experienced laryngologist has seen marked tubercular changes in the larynx in patients in whom not the slightest trace of pulmonary disease could be found. This experience, however, demonstrates nothing for the existence of a primary laryngeal tuberculosis, since, by the physical methods of examination, small central cavities are not easily overlooked. Much more importance is ascribed to the results of postmortem examinations, in which marked tubercular changes in the larynx were found without any discoverable lesion in other organs.

The assumption of primary infection of the larynx, from an etiologic standpoint, is very probable, since it is possible that dust laden with tubercle bacilli may be inspired, penetrate a spot deprived of epithelium, and produce tubercular changes in the depths. It is a question which has not been solved, whether this infection occurs in the manner related above, and if so, if it often occurs in that way.

Respecting secondary tuberculosis of the larynx, we know only this with certainty, that pulmonary tuberculosis very frequently leads to a similar process in the larynx.

The majority of observers at the present day seem to assent to the opinion first announced by Louis, that the secretion coming from the lungs infects excoriated spots in the larynx. This view assumed a more conclusive form with the discovery of the tubercle bacillus, since we may say that the tubercle bacilli contained in the pulmonary secretion gain entrance through the eroded epithelium of the laryngeal mucous membrane. That the retention of the secretion by the pouches of Morgagni favors the development of the infection upon the prominent vocal bands, can not be denied.

In addition to the explanation given above of the migration of the tubercle bacillus from the surface there is another view which assumes that the transporting of the bacillus from the lungs to the larynx takes place through the blood vessels and lymphatics.

E. Frankel, in a work which appeared recently, has defended in a very different way, the first of these theories, viz. the immigration of tubercle bacilli from the surface of the mucous membrane. He believes the origin of tubercular ulcers in the larynx can be traced wholly to the penetration of the surface by tubercle bacilli. Without denying the possibility of this occurrence in isolated cases, we will mention the following reasons for the acceptance of the theory that tubercle bacilli are propagated by the channel of the blood and lymph vessels.

1. We often meet with cases, in the early stage of pulmonary tuberculosis, where the sputum can scarcely be said to contain bacilli, yet there is already an extensive tubercular infiltration of the larynx. In such cases the sputum could scarcely have infected the laryngeal mucous membrane.

2. We often have the opportunity of seeing cases of extensive and rapid pulmonary necrosis where there is not the least tubercular infiltration of the larynx. There can be no question that, in these cases, the larynx is almost always the seat of catarrhal processes with loss of epithelium, nevertheless tuberculous infection does not occur.

3. The correspondence of the diseased side of the lung with that of the larynx has been observed frequently and was first announced by Friedreich, Turck and Schnitzler. This observation has been so often made that it is difficult to attribute it to accident, it also demonstrates a direct communication through lymph and blood vessels.

4. It was announced first by Heinze then by Korkunoff, and later was confirmed by Hajek and proved by microscopic preparations that very frequently a stratum of unchanged tissue is found between the tubercular layer and the superficial epithelium, and this circumstance leads to the opinion that tuberculosis is wont to commence in the *depths of tissue and extend toward the surface*.

While we can not deny the primary transportation of tubercle bacilli through inhalation of dust, and the infection of the epithelium through the pulmonary secretions, nevertheless we must look upon the majority of cases of laryngeal tuberculosis as the result of pulmonary infection transported to the larynx by means of lymph and blood vessels.

Whether this view furnishes an anatomical basis for the anemia and paresis often present at the beginning, and in the course of laryngeal phthisis, is questionable. Investigations on this point can not be made, for the reason, that, after death, all such symptoms are lost. Likewise, it is improbable that the catarrhal changes, accompanying tubercular processes in the larynx, depend upon a specific tubercle-producing cause, since these catarrhal appearances may persist, as already mentioned, without tubercular changes in the tissues becoming manifest. That this catarrh sometimes disappears entirely is a further proof that it is not the expression of a tubercular infection.

So far as anatomico pathologic investigations and observations with the laryngoscope show, every known tubercular change in the larynx begins with an infiltration, which, histologically as well as bacteriologically, is to be regarded as a specific neoplasm dependent upon the immigration of tubercle bacilli. The theory, which is still defended by many, that the destructive changes in the larynx occurring in the course of phthisis originate in a purulent follicular catarrh of non-specific origin, can no longer be regarded as correct, in view of our present knowledge. It can not be denied, however that many superficial losses of substance may result from the corroding action of purulent secretions. Surely, these never lead to extensive destruction. It is probable that superficial laryngeal ulcers, which rapidly heal under antiseptic treatment, belong in this category.

The tubercular infiltration of the larynx, which we must assume to represent the earliest visible sign of tubercular infection, is to be considered the first stage of laryngeal tuberculosis. The amount of infiltration does not depend solely upon the extent of the process, but rather upon the abundance of submucous cellular tissue in some parts of the larynx, and its paucity in others. In the ary-epiglottic folds and mucous covering of the arytenoids, as well as on the lingual surface of the epiglottis and the sub-glottic tissues, the infiltration may reach a considerable size, much less extensive is the infiltration of the false vocal bands although there is considerable infiltration in this spot. On the posterior extremities of the true vocal bands, on the inner surface of the arytenoids, as well as on the lingual surface of the epiglottis, the infiltration is never of great extent.

Macroscopically, the tubercular infiltrate presents itself as a uniformly smooth, rarely irregular, swelling of some part of the larynx whose surface, when not accidentally complicated with an acute catarrh or edema, shows a whitish or pale red color, what is always particularly noticeable is the dull, lusterless tone of the surface, which is found in so pronounced a form in no other infiltration. Not rarely do we see on the surface of the infiltrate a peculiar opaque discoloration and scaling of the epithelium, frequently situated on the inter arytenoid mucous membrane and on the posterior ends of the vocal bands, where the surface of the infiltrate is most exposed to mechanical injury. This change is to be regarded as a pachydermia. We have observed similar pachydermoid changes in infiltration of the inter-arytenoid mucous membrane lasting for many years before an irruption of tubercular products appeared.

In the beginning, tubercular infiltration involves, in most cases, only a circumscribed part of the larynx, and it is only in the rarest instances that the entire larynx is the seat of infiltration from the beginning. Usually those parts which are supplied by the same division of sub mucous cellular tissue are involved simultaneously.

If the infiltration of the cellular tissue reaches a high degree in a circumscribed spot, a true tumor may be formed with tubercular contents. These tubercular tumors were first observed and described by Schnitzler. The tumors look as if the mucous membrane were drawn over them, and this appears either smooth or granular from the tubercles lying in clusters. The tumor is generally single, rarely do they appear in several spots at the same time. Its favorite location is in the pockets of Morgagni the space between the vocal bands, the size may equal that of a hazel nut.

In order to receive a correct idea of the nature of tubercular infiltration, and to know the extent and manner of development of ulceration following infiltration, it will be *necessary to study the microscopic nature of tubercular* infiltration. A microscopic section through the infiltrated tissue shows the presence, under a comparatively normal epithelium, of a thick cellular infiltration, which very frequently is diffuse, sometimes, however, shows in certain spots an accumulation which mainly consists of epitheloid cells and often contains giant cells, as well as genuine tubercles. Nevertheless, it not rarely happens, as Heinze has observed, that, between the epithelium and the upper surface of the tubercular mass, there exists a layer of normal tissue which is free from cellular infiltration and shows but few leucocytes. We heartily agree with Heinze that such microscopic sections go to prove that the tubercular process extends from within outwards, and not vice versa. This being true, we can not understand why the tubercle bacillus, when it finds its way through the thin epithelial coat into the tissues beneath, should produce tubercular infiltration in the deeper parts first, instead of in and beneath the epithelial coat.

When a section is properly stained, bacilli are visible in the tubercles. The number of bacilli is very variable, and often bears no relation to the extent of the infiltration. So long as the infiltrate does not ulcerate, no other kinds of bacteria are present, it is in an ulcerated infiltrate that we first observe staphylococci and streptococci.

B. Frankel has found tubercle bacilli in the substance of the epithelium covering the mucous membrane, although as a rule, in the first stage of infiltration, bacilli are to be found only in the tubercular infiltrate lying under the epithelium.

While, in the beginning of tubercular infiltration, the superficial epithelium still presents a normal appearance, degenerative changes occur in it, just in proportion as the tubercular infiltrate reaches the epithelial coat in a diffuse or a circumscribed spot, at first we notice a loosening and discoloration of the epithelium, next there is a complete separation of epithelium in one spot, and the tubercular infiltrate begins to grow luxuriantly in the direction of the surface. From this stage we can date the commencement of ulceration. It is here necessary to call attention to a point of great importance to beginners in laryngoscopy. They often do not understand that we mean an ulcer when we speak of an infiltrated spot of laryngeal mucous membrane where granulations project. The current definition of an ulcer, anatomically and pathologically speaking, is identical with a loss of substance, and hence it is somewhat unusual to speak of a plainly visible thickening of tissue as an ulcer. We must remember, however, that the origin of most tubercular ulcers bears a similarity to a neoplasm, where first there is a considerable increase of tissue, then rupture of the overlying layers, followed in the last stage by a pushing out of masses of new tissue.

After the irruption of the tubercular infiltrate, the surface of the previously infiltrated, but smooth spots, assumes an irregular, knob like appearance. These granular formations resting on a tubercular base may become so abundant, in circumscribed spots, that they form tumors of considerable size, which, when present in large numbers, may almost close the glottis. This excessive formation of tubercular granulations most often occurs on the inter-arytenoid mucous membrane, on the true and false vocal bands, and more rarely on the petiolus of the epiglottis. We may designate such an infiltrate as tubercular granulation tumors, they differ from the early-formed neoplasms in this, that unlike the latter they are not covered with mucous membrane and epithelium.

With the breaking forth of tubercular granulation tumors the stage of necrosis commences. The granulations have only a low vitality and rapidly succumb to regressive metamorphosis, by which some of them are absorbed, and others are newly developed. During the time that the generation of new cells does not keep pace with the necrosis, peculiarly cleft excrescences, with irregular projecting points, result therefrom and bear the greatest similarity to a necrotic neoplasm. The rapidity with which destruction of granulation tumors takes place is very different in different cases, and is generally dependent upon the course of the case, while in many cases we may observe this ulcerating granular condition of the mucous membrane, lasting for several weeks, in others we find, almost from day to day, a change in the form and distributions of the elevations and depressions, while necrosis and regeneration take place with great rapidity.

While there is an extension of sub mucous infiltration with deposits toward the surface, there is at the same time an advance of the infiltrate in the deeper layers, so, little by little the entire sub mucous layer is infiltrated, the glandular layer is changed into a stratum of granulations, and in places, where the mucous membrane covers the cartilage, the perichondrium also is involved.

The question whether a tubercular infiltrate may begin primarily in the perichondrium, can not be answered at present. In favor of such a condition is the fact that many infiltrates are met with in the vicinity of the arytenoid cartilages, and lead early to immobility of the crico-arytenoid joint.

The question, however, has no practical interest, since it makes no difference whether the perichondrium, which is almost always involved in a later stage, should become primarily involved by the sub-mucous deposit. In either case we find the perichondrium eroded and covered with granulations, and that the cartilages are always the seat of necrosis. Very often the perichondritis occurring in the course of tuberculosis assumes an acute character, whereby suppuration, with partial or even complete necrosis of cartilage results.

In our experience, the most frequent form of perichondritis is the purulent, which results from secondary infection of an ulcer with some sort of bacteria (streptococcus or staphylococcus). The comparatively short time in which suppuration of the crico-arytenoid joint takes place is in favor of that theory.

While almost all authors refer the origin of tubercular ulcers to infiltration, there are others which are designated as "aphthous" ulcers. Exactly what one should understand by such ulcers, has not been clearly defined by anybody. There can be no doubt that under this name different conditions were confounded. The broad flat ulcers which are found upon the false vocal bands, and which show numerous elevations and depressions, by which they were likened to a sieve, and were named aphthous ulcers, are regarded as arising from infiltration. The peculiar appearance arises from this that upon the false vocal band the infiltration often extends diffusely, and all at once the whole surface is ulcerated and appears granulated. That this ulcer on the false cord is due to direct infection of the epithelium, which is generally conceded to be the case, is proved neither anatomically nor laryngoscopically.

In the course of laryngeal tuberculosis, particularly in cases which are of a high grade, shallow ulcerations often occur with a dirty grayish covering. These ulcers are to be attributed to direct infection by the pulmonary secretions. However, as previously stated, it is questionable in many cases whether these ulcers are really tubercular or are nothing more than corrosion ulcers produced by the eroding action of the sputum. The fact that this kind of an ulcer often heals with great rapidity causes us to doubt its tubercular origin.

Ulcers similar to those just mentioned often occur upon the processus vocales of both vocal bands in the course of a genuine tuberculosis.

On the whole, we must admit that the pathogenesis of tubercular ulceration of the larynx is not entirely understood.

Regarding the presence of bacilli in tissues the seat of tuberculosis, it is to be noticed that the copiousness of bacilli is very variable. Whilst in a case of granulation masses, bundles or nests of bacilli are visible, in other cases bacilli are present only sparingly. Likewise, the histologic structure is not the same, since, in some cases, we find only granulation tissue, in others we find on microscopic section an abundance of tubercles with round cells undergoing regressive metamorphosis.

Mercurial Treatment of Tabes Dorsalis.—"DINKLER." Reviewed by V. NOORDEN, Munich. This interesting report details seventy-one cases of tabes collected from Erb's clinic and from private practice, all of which received mercurial treatment. In fifty-eight cases there was improvement of one or more of the symptoms while eleven seemed to be aggravated rather than benefited thereby, especially two cases in which the symptoms became decidedly worse. In these last two, there were indications of brain lesions, involving the arteries and meninges.

The results emphasize the importance of the Fournier-Erb's anti-syphilitic, mercurial treatment in tabes dorsalis, at all events it disproves the objections made, as to its bad results.

In the fifty eight improved cases mentioned above, the following favorable changes were noted, viz. the sensory disturbances were improved, as manifested by the entire disappearance of the feeling of constriction or girdling pains, sense of cold, and of the tingling and creeping sensations, etc., or by lessening of their intensity or lengthening of the intervals. The lancinating pains became milder or entirely disappeared.

Improvement was often noticeable in many of the other sensory disturbances. (Zones of hyperesthesia and of diminished sensibility, became smaller or disappeared entirely.) Improvement of sensibility was quite rapid. As regards coördination and motor disturbances, there was apparent diminution and complete disappearance of the ataxy, which seemed to run a course quite independent of the sensory symptoms.

More favorable still were the effects on the motor disturbances, from that of slight fatigue to a high grade of paresis.

In regard to the tendon reflexes, the symptoms were either temporary or permanent improvement followed.

The atrophy of the optic nerves was favorably affected, as were also the functions of bowels, bladder and sexual organs.

Finally, it should be emphasized that the mercurial treatment of tabes, as well as in cases of secondary syphilis, seems to lessen the destructive metabolism and benefits and increases nutrition.—From the *Centralblatt für Chirurgie*, November, 1893.

Pleurisy with Pneumonia—Para-pneumonic Pleurisies.—H. Schlesinger, Vienna.—G. Lemoine has during a year's observation, encountered seven cases in which pneumonia and pleurisy developed simultaneously. As such pleurisies presented peculiar characteristics and seemed to be of clinical importance, the author has named them "para-pneumonic pleurisies." The name is to indicate that the pleurisy does not follow the pneumonia, but appears simultaneously with it. The difference according to Lemoine from "meta-pneumonic pleurisies is that when the pleuritic inflammation appears at the same time with the lung affection, we have to do only with the local manifestations of a general infection. The pleurisy which sets in at or near the close of the pneumonia is caused (or may be caused) by a kind of re-infection with the pneumococcus.

The most important differential point lies in the fact that whereas a "para pneumonic" exudate frequently becomes purulent, the meta-pneumonic exudate seldom does.

From among 120 cases selected by Lemoine from literature, he finds only thirteen accounts of development of pneumonia and pleurisy, in which the exudate was purulent. In the cases there existed serious complications such as variola, influenza and puerperal diseases.

The disease attacks mostly young adults, both sexes being about equally affected. Complications are frequent. In twenty six cases of pneumonia treated by Lemoine, seven were affected.—(From *Centralblatt für Klinische Medicin*, November, 1893.)

Cetrarin.—Cetrarin has been employed in chloro anemia and gastric troubles of hysteria.

There is an increase in the number of globules, and coloring matter which can not be carried beyond a certain point, but which perhaps can be continued by the aid of iron. General improvement is still more notable, the acidity of the stomach contents is augmented. It is well tolerated, but it often produces constipation.

BOOK NOTICES

The Principles and Practice of Surgery. By John Ashhurst, Jr., M.D., Barton Professor of Surgery and Professor of Clinical Surgery in the University of Pennsylvania, Surgeon to the Pennsylvania Hospital, Senior Surgeon to the University Hospital and to the Children's Hospital, Consulting Surgeon to the Woman's Hospital, to St. Christopher's Hospital, etc. Sixth edition enlarged and thoroughly revised with a colored plate, and 656 illustrations in the text. 8 vo. cl. pp. 1,166. Philadelphia: Lea Brothers & Co. 1893.

One can not help picking up a new edition of this old favorite without a feeling of pleasure, like that of unexpectedly meeting an old friend. In this edition there is an excellent chapter on surgical bacteriology by Dr. C. B. Nancrede, which is about the only feature of the work that will strike the reader as materially differing from former editions. The pathology in general does not bring the text to the accepted standard, and in modern practice the recent procedures are not mentioned. The author knows what tuberculosis is, for he correctly describes it on page 471, but one looks in vain for the application of that knowledge in the chapter on diseases of the joints. Iodoformization is not mentioned as a means of treatment. In excision of the hip, temporary resection of the trochanter is not mentioned, and indeed the only case where osteoplastic resection is mentioned is in the operation for removal of rectum. The uses of osteoplastic resection in trephining, in caries of the external table, of the acromion, or the tubercle of the tibia, are not mentioned, but a foot note on page 682 says that "Bruns, Trendelenburg and Volker recommend temporary resection of the olecranon."

The author advises no interference in cases of sacro iliac disease, neither iodoformization, nor through drainage, the latter long ago introduced by Sayre, is not mentioned as a therapeutic resource in this affection. In treatment of club-foot, the method by brisement forcé, is not mentioned, nor is that of any of the mechanical appliances for stretching, such as are figured in Bradford and other works on orthopedic surgery. In skin grafting, the method of Reverdin is mentioned and also that of Thiersch, but the latter method now generally used by advanced surgeons is not described. In partial occlusion of the anus the author does not speak of the modern operation of bringing the divided rectum to the incision and there fastening it.

The truth seems to be that our author has failed to revise the book so as to include the really recent methods as practiced in most college clinics, and if one wishes to keep pace with modern surgery he must seek information elsewhere.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, A.M., M.D., LL.D., Professor of Materia Medica, General Therapeutics and Hygiene in Jefferson Medical College, etc., etc. Eighth edition, revised and enlarged. Cl., 8vo, pp. 820. New York: D. Appleton & Co. Chicago: A. C. McClurg & Co. 1893. Price, $5.00.

When a book passes to its eighth edition, it would seem that critics should be silent and recognize that the public had already passed judgment upon the book. The author was a member of the Revision Committee which revised the last Pharmacopeia, and he has therefore made this work to correspond with the changes. He has, however, admitted the new synthetical products. In regard to the decimal system the author says:

"As the new Pharmacopeia has employed the metric system in its weights and measures, it becomes necessary for all systematic works treating of materia medica to follow its example. That my readers, unacquainted with the metric system, may have no difficulty, I have added in a brief appendix a tabular statement of the equivalents of weights and measures from one Troy ounce down."

A more striking way of making the decimal system unpopular could not have been chosen. What is needed to insure that readers "unfamiliar with the metric system shall have no difficulty," is to print the dose of each drug in metric terms, no complicated "rule for conversion" or comparative tables will then be necessary. A metric posologic table is worth a volume of tables for conversion.

Inebriety: Its Causes, its Results, its Remedy. By Franklin D. Clum, M.D. Third revised edition, pp. 248. Philadelphia: J. P. Lippincott & Co. 1892.

This little book discusses in a popular way the cause and treatment of inebriety, and the whole book is practically devoted to the question, "Shall we give the drunkard our sympathy or our condemnation?" The author writes scientifically, entertainingly and sympathetically about the unfortunate inebriate, and the book will be found of much value in the study of the question, especially the popular side of it.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS
Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No 68 WABASH AVE CHICAGO ILLINOIS
F J REBMAN LONDON AGENT 11 Adam Street STRAND LONDON
W H LOWDERMILK & CO, WASHINGTON, AGENTS

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All members of the Association should send their Annual Dues to the Treasurer RICHARD J DUNGLISON, M D, Lock Box 1274, Philadelphia Pa

SATURDAY, DECEMBER 9, 1893

TREATMENT OF UTERINE FIBROIDS

Until recently it has been taught that fibroid tumors of the uterus were comparatively harmless to their bearers, a source of inconvenience for a few years on account of hemorrhage and possible pressure, but the menopause was a haven of rest toward which the sufferer might look for relief from the bleeding and weight of her burden With the increased knowledge of pelvic disease came the unpleasant fact that not all fibromata are harmless after the change of life, that shrinkage does not always occur, but that on the contrary the tumor in some cases continues to grow, at times with an added impulse Hemorrhage, too, does not invariably cease and, worse than all, retrograde changes are often at work transforming a benign growth into a menace to life

So long as the tumor was regarded as harmless it was considered sufficient to tide the patient along with palliative measures, ergot, muriate of ammonia and kindred drugs, trusting that nature would do what the doctor could not do—bring relief With the advance of abdominal surgery half-hearted measures could no longer be tolerated, and patients demanded that the surgeon bring them speedy relief in words that could not be misunderstood

At the present time, three methods of cure are presented to the profession, each with strong advocates—the application of electricity to the growth, the induction of premature menopause by removal of the ovaries and tubes, and the removal of the tumor, either with or without the removal of the uterus and its appendages

While each method may be said to possess certain advantages, yet that one alone which removes the tumor can be called curative in the true sense of the term Electricity has to a great extent fallen short of the claims advanced for it and is conceded now, by many who have formerly advocated its use, to be simply and purely palliative The shrinkage in the size of the tumor which was said to follow its application in every case has been shown to be only rarely accomplished Electro-puncture is proved to be positively harmful, one author going so far as to declare that it is attended by more risk to the patient than is hysterectomy in skilled hands The cure is only symptomatic, without doubt the pain and hemorrhage are relieved, but electricity accomplishes little more than the older treatment by ergot, and muriate of ammonia—the tumor is still present to harass by its weight and to menace the future health of the patient by retrograde changes

The removal of the ovaries with the intention of causing a cessation of the hemorrhage and a diminution in the size of the growth by bringing about the menopause, is open to the objection that it fails to accomplish the desired end in a few cases, just as the change of life itself, when occurring in the course of nature, fails Then too the ovaries and tubes may be (and often are) so situated in relation to the fibroid as to change the operation from a simple procedure to one so difficult that total hysterectomy gives the patient much the better chance of recovery

There remain therefore, only the removal of the growth without the uterus, myomectomy, and the extirpation of the tumor together with the uterus. Myomectomy possesses an advantage which none of the other operations have, that of leaving the uterus, however crippled, in such condition that the patient may bear children, but, in view of the fact that in most instances the appendages are so diseased as to make the hope of offspring futile, the operation loses much of its superiority over other methods of treatment It has, however, been performed with success and is particularly applicable to subperitoneal growths and such tumors as can be enucleated without opening the uterine cavity, particularly in young women

Hysterectomy is without doubt the operation with the widest range of usefulness, and to the perfecting of this, the attention of abdominal surgeons is at present directed Their ranks are, as it were, divided into two great companies—the one advocating the extra-peritoneal operation by means of the nœud, and the other the intra-peritoneal method, dropping the stump as in ovariotomy At present the advantage of statistics is in favor of the nœud, but perfection of technique may cause a change in this respect At first glance, the nœud seems to be a relapse into older and cruder notions, while the intra-peritoneal method certainly is more scientific and approaches more nearly ideal surgery With the nœud the operation is less bloody and requires less time for its performance than the intra peritoneal procedure, which factors alone may be sufficient to turn the scale in favor of recovery in a patient exhausted already by hemorrhage

The operation by means of the nœud is not always a simple procedure A pedicle must be made if one does not exist, and to do this may severely tax the surgeon's resources To leave a pedicle as the size of the surgeon's arm and inveigh against the operation is simply for the operator to confess that he is not equal to the demands upon his skill A pedicle can be made and should be, or the operator must turn to some other means of relieving his patient It is claimed by its opponents that the nœud is responsible for more post-operative herniæ than the other method On this point there is great need of honest, straightforward experience with less theorizing

Be the method what it may—and each operator will cling to that which in his hands is followed by the greater number of recoveries—the great element in the surgical treatment is time It is a self-evident proposition that the smaller the tumor the greater the prospect of recovery The practitioner of to-day would hardly be satisfied to allow an ovarian tumor to enlarge to the size of those formerly seen, and the arguments in favor of the removal of ovarian growths while small are equally forcible when applied to uterine fibromata Let the general practitioner fully understand the dangers of delay and the statistics of hysterectomy will become better even than they are now A great advance in the saving of life has been made, but a still greater is possible if the general practitioner will recognize his responsibility in this as he has in other pelvic diseases

SOME OLD STORIES

During the past two weeks the editor of this Journal has been confined to his room on account of a severe attack of bronchitis While sitting by the fire one day and looking at his book shelf, his eye fell on some old and worm-eaten volumes from which the title was nearly effaced, but which on close inspection proved to be the "Histoire de L'Anatomie et de la Chirurgie," Par M Portal, Paris, 1770 During a temporary lull in the rasping cough, the editor read from old Antoine Portal, a part of the first book, a running translation of selections of which he thought might interest others besides surgeons

'Melampus is the first to whom is attributed medical writing He lived about the year of the world 2705 (1,380 years before Jesus Christ), was born at Argos, of Amithaon and Algaide or Idomena, the daughter of Abas Melampus was a shepherd, and the two daughters of the king of the country falling insane, he was called and caused them to be purged with hellebore, and frequently bathed in a certain well which cured them"

There was apparently nothing slow about Melampus in the matter of getting his fee, for Portal says that,

"He asked for and obtained a slice of the kingdom for himself and one for his brother Bias, and they espoused the two daughters,"

and lived happily ever afterwards, we presume

Portal attributes two books to Melampus, but no less an authority than Dr Wm Smith places them to the credit of another Melampus

"The Druids," says Portal, "existed in Gaul at the same time as Melampus They were at once priests, judges and physicians, and inhabited the forests for which they had a superstitious veneration" They thought well of oak mistletoe as a medicine, "regarding it as a remedy against sterility and poisons"

Empedocles, who was a pupil of Pythagoras, attained such perfection in anatomy and physiology, that he desired to be enrolled among the gods, and when about seventy-seven years old, to make posterity sure that he had been carried to the skies bodily, he threw himself into a volcano

Democritus was born at Milet, the third year of the seventy seventh Olympiad He was a great traveler and vivisector, and made himself obnoxious to the neighbors by his dissections Some young men in ghostly apparel tried in vain to frighten him, and they then concluded him to be insane Hippocrates was sent for, he remained all night and was charmed with Democritus' knowledge of anatomy and scientific attainments generally, and in the morning rebuked the mocking neighbors Portal here tells a story about a young woman who was with the followers of Hippocrates on that occasion, which it would be highly improper to translate

Diagoras was a servant of Democritus by whom he was taught medicine, and on the death of Democritus, he become famous as a physician and as an atheist

"Going one day to a hotel, while waiting for his dinner, he took a wooden statue of Hercules, and threw it in the fire with the words, 'Hercules will to day boil our pot'"

The hair of the innkeeper probably stood on end at the sacrilegious act, but we have no account showing that the dinner was any worse

Euriphon was a physician of Cnidos, quoted by Hippocrates, who was represented by Plato's character of Cinesias, son of Evagoras as

"Thin as a skeleton, with a chest full of pus the thighs like a reed, and all the body covered with scars, which Euriphon had made in burning and in a word, by phthisis and empyema *consumed*"

It shows that the actual cautery was used for opening empyema before Hippocrates

Of Plato, who like all the older Greek philosophers taught medicine as a branch of philosophy, he repeats the story, that his name was originally Aristocles, "which he quitted, to take that of Plato, either on account of the breadth of his shoulders, or the breadth of his forehead, or the ample and diffuse style of his writings"

CRITOBULUS who lived a little after, was the surgeon of KING PHILIP of Macedon

> "He was very fortunate in extracting from the eye of that Prince a piece of an arrow which had wounded it, and the cure was completed in such manner, that PHILIP had no disfigurement"

"ARISTOTLE," says PORTAL, "when asked by KING PHILIP to take charge of the education of his son ALEXANDER, "sent him a letter too flattering to be omitted"

> "PHILIP to ARISTOTLE, salut 'I thank God not less for having given me a son, than that he was born in a time, when he can be taken to receive your instructions I hope that, raised by you, he will render himself worthy of the blood of which he sprung and of the monarchy to which he is destined'"

ARISTOTLE was an excellent anatomist, and although borrowing much from HIPPOCRATES, he added a great many names to anatomic nomenclature "He spoke of the intestine jejunum, he distinguished the colon, the cecum and the rectum He was the first to give the name *aorta* to that great vessel," and was the first to divide the body into arbitrary regions, for descriptive purposes, *i e*, head, neck, body, arms and legs He gave the name *ventricles* to the cavities of the heart, the diaphragm he called the "diazoma" The testicles he thought were well placed, but not absolutely necessary

"It is to be remarked," says PORTAL, "that not any physician before ARISTOTLE has written touching the names of parts of the body"

"DIOCLES, the first physician who enjoyed great reputation after HIPPOCRATES," the Athenians called the second HIPPOCRATES GALEN spoke of him as a man who had made great progress in the art of cure He flourished one hundred and thirty years after HIPPOCRATES He invented an arrow extractor, which in the time of CELSUS, bore his name, and also a head bandage which was used for several centuries

PRAXAGORAS was the next distinguished surgeon He also was born on the Island of Cos, and was the last of the race of the Asclepiades

> "According to GALEN he was one of the greatest anatomists of his times, but his writings have been lost, and we know little of his *anatomic sentiments* * * * he was the first who distinguished between veins and arteries, properly so called He also practiced surgery In the disease called *ileus*, after having the patient swallow a lead ball as practiced by HIPPOCRATES, and the disease still continuing, he made very boldly an incision into the belly, to extract the excrement, and afterward restore the intestine"

Having thus unexpectedly come upon an advanced abdominal surgeon in the fourth century, B C, the editor, fearing that a discussion of appendicitis might follow next, laid old PORTAL tenderly on the shelf

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IS THERE AN AMBLYOPIA EXANOPSIA?

It is a common observation that the deviated eye in ordinary (non-alternating) strabismus presents often a very low degree of sight, without structural changes to account for it Two explanations of this condition have been suggested, but it has not yet been possible to decide which is the correct one On the one hand it is claimed that the deviating eye loses its visual acuity by non-use Whenever double sight occurs *in consequence of want of agreement in* the direction of the two visual axes, there is a tendency to the suppression of one or the other of the retinal images If one of the images is less sharp than the other, on account of a less correct state of refraction of that eye, it is the weaker image which is more easily suppressed Indeed, in strabismus it is mostly (though not always), the more ametropic eye which deviates But even when the two eyes are alike, a mental suppression of an image can be maintained by practice, as in the habit of using the microscope with both eyes open The theory of amblyopia exanopsia presupposes that the persistent suppression of the images of the one eye leads ultimately to reduced sensitiveness of the corresponding optic centers The proof of the correctness of this explanation is claimed to be the improvement in the sight of the squinting eye after an operation has straightened it so as to permit normal binocular vision

The opponents of this theory state, however, that such an improvement in sight is not common, and that when it does occur it is but rarely very marked, even after the most perfect squint operation On the other hand, they say, that in hypermetropia the sight of one eye is frequently much weaker than the other, *even when there is no squint* It seems hence probable that the amblyopia of an hypermetropic squinting eye is not the result, but the cause of the strabismus, since with the one eye amblyopic there is no diplopia caused by the deviation, and hence there is no tendency to oppose the deviation in case of imperfect muscular balance They further point out that monocular weak sight which is not congenital, but due to other causes, such as opacity of the cornea, may also lead to squint

A striking and unique observation, which throws much light on this question has been brought before the American Ophthalmological Society by DR W B JOHNSON (detailed in the last number of the *Ophthalmic Record*)

A young man of 19 years applied for the treatment of convergent squint of the left eye Both eyes were slightly far-sighted, but while the right one had perfect vision, the left one could only count fingers at six feet distance Ten days after the examination the good eye was destroyed by an accident and had to be removed Six days later the left eye was again treated and found to be able to count fingers only at three feet distance DR JOHNSON then began training the deficient eye in reading test letters His sight thereupon improved daily At first his field of vision seemed to be limited to the object at which he was looking directly, but in about one week's time his range of sight became normal In less than two weeks the deficient eye had gained perfect vision and kept it permanently

This valuable observation teaches in the most positive manner that the monocular amblyopia associated with strabismus may be due to a functional condition of the optic center which can pass off after the loss of the better eye But we must not attempt to deduct false conclusions from this case We can neither infer whether the poor sight is always of functional origin and hence of unstable character, nor can we say with certainty whether in this case the strabismus preceded the amblyopia or vice versa Even the question at issue, whether amblyopia can result from non use of the eye, is hence not definitely decided by this case But it opens to us the prospect of unexpected therapeutic possibilities in the management of the amblyopia of squint, and therefore should prove a strong stimulus to further studies in this direction

LIABILITY OF A PHYSICIAN FOR SELLING INTOXICATING LIQUORS IN IOWA

The Iowa statute which prohibits the sale of intoxicating liquors, makes an exception in favor of licensed physicians, permitting them to dispense, in good faith, such liquors as medicine to patients actually sick and under their treatment at the time of such dispensing The defendant in the case of State v Field, decided by the Supreme Court of Iowa, Oct 5, 1893, was a physician and kept a drug store The evidence showed that people would go to his store and ask for "red medicine" which meant whisky, or "white medicine," which meant alcohol, and obtain it A theory of the defense was that whatever was obtained was prescribed by the dispenser as medicine The trial court instructed the jury that if it found that the liquor was sold and dispensed, as by a physician to patients actually sick and under his treatment, to acquit This the Supreme Court said was a correct statement of the law, as applicable to such a case, and that it would not be correct to add to the charge the clause, "or whom the doctor believed to be actually sick"

STATE BOARD OF HEALTH FOR GEORGIA

The American Medical Association long ago in distinct terms, commended the establishment of State Boards of Health, and so far as the voice of the Association can be heard, it is thrown in advance to the support of our brethren in Georgia, who urge upon their Legislature the formation of a State Board of Health

The welfare of the people, the relief of the weak, the prevention of epidemics, the limitation of disease, the increase of longevity, and the happiness of the public, are each to an appreciable extent affected by the establishment of a State Board of Health, with ample powers Let Georgia fall into line with her sister States

SOCIETY NEWS

Southern Surgical and Gynecological Association

Abstract of the Proceedings of the Sixth Annual Meeting, held in New Orleans Louisiana, Nov 14, 15 and 16, 1893

(Concluded from page 865)

Second Day—Afternoon Session

Dr Kollock, First Vice-President, took the chair, and President Brown delivered his Annual Address He selected for his subject,

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION—ITS ORIGIN, OBJECTS AND AIMS

He said six years ago a small band of earnest, brave and determined Southern surgeons assembled in the city of Birmingham, Ala, with Dr Haggard as President, amidst doubts, anxieties and misgivings for the future, to found and organize this Association, and in this effort to build up an organization that would meet the advanced requirements of the times, and that should rank in point of talent, efficiency and high-toned character with the other great institutions of the kind, in this and other countries But notwithstanding the stupendous difficulties encountered, the vast labor expended and the many obstacles in our path, the Association stands to day a monument of energy, enterprise and indomitable will power Dr Brown then traced the growth of the Association and referred to its work This excellent paper was printed in full in this Journal November 18

Dr B E Hadra of Galveston, Texas, read a paper entitled

SOME REMARKS ON THE SURGICAL TREATMENT OF EPILEPSY

He thinks that modern researches promise to divest even the so called genuine epilepsy of its mysterious functional character and to make it consequently more accessible to surgical interference Among the points he would mention as having to be cleared up, is the deficiency in the knowledge of the great number of brain centers that must exist As an instance he mentions the unquestionable fact that very often the stomach or the intestines give the initial symptoms, but because we do not yet know these centers, and because the signals are very abstruse, it may easily happen that another group of muscles which only secondarily become excited is charged with giving the signal The next point is to find the real seat of the primary morbid changes in the brain, which is not necessarily the focus belonging to the initial signal Topographical and electrical localization map out only the latter He insists that the induced current used in a different way will be all we may desire for such a purpose It must be applied over a large area of the exposed cortex, until a spot is met from where a certain group of muscles not only can be made to contract,but from where a regular epileptic fit can be elicited This spot must be the locality of the morbid substratum, whether it coincides with the physiologic focus of the muscles giving the signal or not, consequently this spot must be removed

He concluded his paper with the proposition to have uniform blanks for operations on the brain, and to have the questions filled by a critical friend during the operation in order to avoid neglect and to prevent post-operative imagination from playing its obliging part in the adjustment of the historic data

Dr John D S Davis of Birmingham, Ala, read a paper entitled

THE MANAGEMENT OF THE EPICYSTIC FISTULA

He said the epicystic surgical fistula is the title given to a supra pubic fistula into the bladder, created by the surgeon for exploration, intra-vesical treatment and drainage A fistula which, acting as an artificial urethra, is capable of giving free access to the inside of the bladder for cystoscopic exploration, provides a ready, convenient and comfortable means of emptying the bladder at will, and gives the surgeon a competent opening into the viscus for intra-vesical applications It constitutes an essential element in the speedy and complete evacuation of the contents of the bladder in all epicystic operations, and imitates nature in the restoration of its own continuity as the pathologic changes within the bladder subside

Permanent after drainage in all intra vesical operations can not be necessary, but is highly essential to secure good and sufficient drainage until the paravascular tissue is dis engorged, the cystitis is relieved and the urine become normal and passes per urethra unobstructed And until this end is attained, complete artificial arrangement for the escape of the contents of the viscus must be made In such cases of prostatic hypertrophy or malignant growths, when removal of the obstruction is impossible or contra indicated, the epicystic surgical fistula is clearly indicated and essentially necessary

Dr Hunter McGuire of Richmond reported a series of cases of "Tuberculosis of the Bladder"

Dr William T Briggs of Nashville, followed with a paper entitled

PERSONAL EXPERIENCE IN THE OPERATIVE TREATMENT OF STONE IN THE BLADDER

He said living in the midst of the stone region, and in a city whose celebrity as a surgical center has been long established, it has been his fortune to have met with an unusually large number of cases of vesical calculi He had had 284 cases of stone under observation during the past 42 years The Southern States had furnished the greatest number of the cases, a few had come from Western States, Tennessee, Kentucky, and Alabama have supplied the largest number, but Georgia, Florida, Texas, Arkansas, North Carolina, Virginia, Missouri and Illinois have contributed cases Two hundred and seventy-two of the number were males, twelve females One hundred and fifty-three were children, or youths under twenty years of age, one hundred and thirty-one were adults varying in age from twenty one to eighty

In operations for stone he had not restricted himself to any single method He had done all of the operations, both cutting and crushing, and he considers it very fortunate that surgery has so many resources for the relief of this distressing and painful malady The success of every method of operating largely depends on the preparatory treatment of the patient The preeminent success of Dudley, Mott and others was doubtless due to the judicious treatment employed in the preparation of subjects for the operation, and Dr Briggs is sure that his own success has been greatly enhanced by a strict observance of the preparatory treatment

In conclusion, Dr Briggs said his experience in the surgical treatment of stone in the bladder would sustain the following propositions

1 No method of operation is adapted to all cases,

2 Thorough preparatory treatment is essential to success,

3 Litholopaxy is *the* operation when the patient is an adult, with a capacious and tolerant urethra, with a bladder free from severe chronic cystitis, and with a small or medium sized stone or, if large, of soft consistence,

4 The supra pubic is the best operation for large and hard calculi,

5 The medio-bilateral should be chosen in all other conditions, because it is the easiest, safest and best

HYPERTROPHY OF THE OMENTUM IN HERNIA, WITH SPECIMEN

Dr Geo A Baxter of Chattanooga, read a paper with this caption and presented a specimen (congenital) from a negro, 34 years of age, which had existed until early manhood, about the size of a goose egg It was directly increased somewhat by working in a rolling mill thirteen years ago, but has had a constant growth since that time until it reached one half or two-thirds the way to his knees, and became an unendurable nuisance It was therefore removed closure being made at the same time

Dr Willis F Westmoreland of Atlanta, read a paper on the

TREATMENT OF GUNSHOT WOUNDS

The first of this class of injuries that he was called upon to treat was shortly after he had graduated, and it thoroughly convinced him of the fallacy of probing He never uses a probe in a gunshot wound except as it may become necessary in the progress of a formal antiseptic operation The probing rarely does any good beyond satisfying a morbid curiosity Even if the wound is not infected by the probe itself, it allows the entrance of air It destroys nature's occlusive blood clot and in this way prevents prompt union

Dr F W Parham of New Orleans, read a paper, which will appear in the Journal, on

WYETH'S BLOODLESS METHOD IN AMPUTATION AT THE HIP

Dr Parham prefaced his own paper by reading some extracts from a paper by Dr John A Wyeth, read before the last meeting of the New York State Medical Association He made use, also, of the statistics kindly furnished him by Dr Wyeth These statistics were as follows sarcoma, 17 cases, 2 deaths, 11 76 per cent Inflammatory bone disease, 18 cases, 3 deaths, 16 6 per cent Violence, 4 cases, 4 deaths, 100 per cent Nerve injury, 1 case, 0 death Total for disease, 36 cases, 5 deaths, 13 88 per cent For injury, 4 cases, 4 deaths, 100 per cent For both disease and injury, 40 cases, 9 deaths, or a total of 22 5 per cent In this list is one case now published for the first time Boy aged 3, sarcoma of thigh, recurrent, amputated by Wyeth's method by Dr Parham Oct 5, 1893, discharged cured Oct 24, 1893 These statistics show a mortality reduction for civil practice of at least one half Ashhurst's statistics gave 40 2 per cent for disease, 82 4 per cent for injury, or a total of 64 1 per cent Leming gives gunshot wounds, 98 per cent, disease, 42 per cent

Dr Parham referred to the various methods proposed for controlling hemorrhage at the hip, and spoke of the various modifications of the Wyeth method He specially urged that the outer pin should be placed higher, so that the disarticulation might be done before the tube was removed He favored the suggestion of Thomas that in placing the pins, the tube should be put around first at the proper place, and that then the pins should be put in at the lower border of the tube He believed that the bone should be dis articulated entirely without sawing In conclusion, the reader remarked "I am inclined to agree with Murdoch that the method of Wyeth is the best yet devised"

Dr W B Rogers of Memphis, Tenn, read a paper entitled,

LAPAROTOMY IN GENERAL SURGERY—REPORT OF TWENTY CASES

Dr J McFadden Gaston of Atlanta, Ga, read a paper entitled,

OPERATIVE PROCEDURES FOR CARCINOMATOUS TUMORS OF THE BREAST

He said a point of great moment, as to the extent of operative procedure pertains to the leaving of any portion of the mammary gland, when only partially implicated in the carcinomatous growth The esthetic element should never enter into the decision of such a vital question as the arrest of carcinoma, and whenever a breast is the seat of a malignant tumor, whether wholly or partially involved, there should be no hesitation about removing the entire glandular structure If a part of the mammary gland only seems to be involved, and it is evident the knife can be carried outside of the neoplasm into the apparently sound tissues of the breast, there is every reason to believe that if any portion of the gland is left it may become the seat of disease, and that recurrence will most likely follow the operation On the other hand, an entire ablation offers better prospects of success

The relative advantages of the knife and cauteries in the management of carcinoma depend very much upon the progress of the disease In the incipiency of the local trouble, there can be no doubt in regard to the excision being preferable to cauterization, but after full development of a tumor with a tendency to degeneration and breaking down of its structure, the resort to escharotics has its advantages in extending to the remote ramifications of the disease It is a prevalent impression that certain caustic applications attack diseased structure without affecting the sound tissues, and that the so called roots of a cancer are thus destroyed There seems to be some just foundation for this belief in regard to applications of arsenic, but the destructive effect of caustic potash in the form of Vienna paste, extends to every vital structure with which it comes in contact, and the same holds in reference to the plaster of sulphuric acid and charcoal as an escharotic Dr Gaston said the treatment of carcinomatous tumors of the breast with caustics had been tested fully by Bougard of Belgium His paste contains chlorid of zinc, arsenic, cinnabar and corrosive sublimate Of 160 cases 62 or nearly 40 per cent were free from recurrences three years after treatment

Dr James A Goggans of Alexander City, Ala, read a paper on

THE DIAGNOSIS OF SOME ABDOMINAL TUMORS SUPPOSED TO BE OVARIAN

Dr Goggans said the first requisite of the abdominal or pelvic surgeon is to acquire the ability to make a diagnosis

Text-books led one to believe that this was quite an easy thing to do, but his experience had convinced him to the contrary He then reported a few cases which had come under his observation which served to illustrate the fact that the diagnosis of many cases is often difficult, and in some cases quite impossible

DR JOHN T WILSON of Sherman, Texas, read a paper entitled,

DOES GONORRHEA IN THE FEMALE INVARIABLY PREVENT CONCEPTION?

He said it has long been known that gonorrhea in the female was sometimes attended with complications that proved troublesome and of serious import Authors had for many years been describing endometritis, metritis, inflammations of the tubes, ovaries and peritoneum produced by an ascending specific vaginitis, these structures being invaded by the poison slowly creeping up through the cervix, involving first the mucous membranes in its tract, and extending by continuity of structure to the deeper tissues The more serious results, however, were not appreciated, nor so well understood until within recent years, when laparotomy became so common an operation, and the pathology of the more important sequelæ were studied from the specimens themselves According to the experience of our best authorities, it is so difficult to positively differentiate between gonorrheal and severe simple vaginitis without a clear and authentic history, it being attended with the same symptoms and the properties of also infecting the male, that it is not altogether an easy task to say when ovarian, tubal and uterine troubles, even with the presence of the Neisser gonococcus, have a specific origin, especially as simple vaginitis will sometimes produce them all Dr Wilson had observed quite a number of women who were the victims of gonorrheal infection, many of them innocently so, having contracted it from their husbands, and believed it to be an ordinary leucorrhea, many of those whose history he was enabled to follow afterwards bore children, for many years were apparently healthy, and gave no evidence of the usual complications

Dr Wilson then reported cases illustrative of some of these conditions and results That gonorrhea does frequently prevent conception is probably well established, but he does not think it is by any means the universal rule, clinical illustrations are too many to the contrary If Noeggerath's statements are literally true, sterile women and fruitless marriages would be far more common and the increase in the race would be greatly lessened, for there are a surprisingly large percentage of men judging from his experience, who, if they confessed the truth, have suffered at some time in their lives with gonorrhea

DR JAMES E THOMPSON of Galveston, Tex, read

SOME REMARKS ON THE PRACTICAL TREATMENT OF HEPATIC ABSCESS

The author confined himself to a few practical remarks on the diagnosis and treatment of hepatic abscess, and reported two interesting cases He mentioned a few points on the treatment of the cavity after the contents had been successfully removed It is often exceedingly difficult to obtain free drainage, even when large tubes are employed In some cases even swabbing the walls of the cavity is ineffectual, and these cases are practically hopeless, owing perhaps to inherent tissue weakness The author tried curetting in one of his cases, and although he removed as he thought all necrotic tissue, still in a few days the cavity was as bad as before Continuous irrigation often affords a means of efficient removal, but the tubes have an aggravating habit of becoming blocked, necessitating frequent changing and cleaning Irrigation with a solution of sulphate of quinin, 1–1000, was in one of his cases remarkably successful, and although the improvement may have been a coincidence and not a *post hoc ergo propter hoc*, he thinks that in cases of amœbic dysentery, at least, it deserves a fair trial

The following officers were elected for the ensuing year

President—Dr Cornelius Kollock of Cheraw, S C

First Vice President—Dr A B Miles of New Orleans, La

Second Vice-President—Dr J B S Holmes of Rome, Georgia

Secretary—Dr W E B Davis of Birmingham, Ala

Treasurer—Dr H P Cochrane of Franklin, Tenn

After introducing and adopting resolutions of thanks, the Association adjourned to meet in the city of Charleston, S C, third Tuesday in November, 1894

Vermont State Medical Society

Eightieth Annual Meeting—Held in Rutland, Oct 12 and 13, 1893

Reported by DR D C HAWLEY, Secretary

FIRST DAY—MORNING SESSION

The session was opened at 10 o'clock with prayer by the REV DR HAINES of Rutland

Delegates were present from New York, Connecticut, Massachusetts and New Hampshire

An obituary of Walter Carpenter, M D, late of Burlington, was presented by DR HENRY D HOLTON of Brattleboro

DR M R CRAIN of Rutland, presented a paper on the

LOCATION OF THE LESION IN PARALYSIS

He stated that there are two general divisions, atrophic and non atrophic paralysis

In the first, there is rapid wasting of the muscles affected, because the lesion is situated at the trophic center, or at some point between the trophic center and the muscles that are paralyzed These being cut off from the center that controls their nutrition, waste rapidly The lesion may be in the brain, the cord, the peripheral nerves or their nerve roots

The non-atrophic form of paralysis is caused by a lesion of the primitive motor center, or at some point between the motor center and the trophic center, causing paralysis without wasting of the muscles, except that caused by disease

In all cases of paralysis, there occurs secondary degeneration of the nervous tract affected, and the degeneration occurs in the direction the impulses travel That is to say, if we have a transverse lesion of the cord, the motor fibers will degenerate towards the periphery, while the sensory fibers will degenerate towards the brain

He uses both the galvanic and faradic currents in electro-diagnosis, but recommended the use of the faradic current, as better for physicians, who had had no special training in electro diagnosis

The paper then dealt exhaustively with the localization of the lesion in the brain and cord, in various diseases and in cases of traumatism

PROF J HENRY JACKSON of Barre, presented a paper entitled

SOME THOUGHTS CONCERNING THE LIVER IN HEALTH

He said that one office of the liver, not usually assigned to it, was to confine the digestive ferments to their own proper domain, where they are eminently useful, and to prevent their emergence into the general circulation, where they would be decidedly harmful Prof Albertoni has found that peptones injected into the jugular vein depress the circulation, arrest the secretion of the kidneys and cause convulsions and death

We recognize the action of the liver in the destruction of waste and surplus albuminoids, and we are learning that urea is formed, to some extent, by the liver, and not by the kidneys, and that lithiasis or lithemia is primarily a derangement of the liver

The amount of glycogen in the liver varies from 3 to 10 per cent

Glucose when taken as food and absorbed from the alimentary canal, is deposited in the liver as glycogen, the change which takes place being a dehydration, i e, glucose minus water equals glycogen While in this condition the glycogen forms part of the substance of the liver, and is probably reserve material, to be afterwards consumed in some other part of the body It is converted into glucose by the addition of one equivalent of water, and carried away from the storehouse as the wants of the system require.

A variety of circumstances may so increase the percentage of glucose in the blood as to cause a saccharin condition of the urine

Adjourned

FIRST DAY—AFTERNOON SESSION

DR J D BREWSTER of Windsor, presented the Vice President's Annual Address, entitled,

A REVIEW OF TREATMENTS OF PHTHISIS PULMONALIS,

In which he said I shall deal with the subject in a retrogressive manner beginning with a review of modern therapy and then compare our advanced(?) ideas with those of our forefathers

I shall make three divisions of the subject 1, prophylactic, 2, medicinal, 3, climatic

1 *Prophylactic* —It should date from birth A baby should not nurse either a mother or wet-nurse who is consumptive The much-advertised baby foods are to be tabooed, for *not one* of them contains, in sufficient quantity, that most necessary ingredient—fat Great care should be taken that no impure cows' milk is used Over feeding, under feeding—in short, anything that interferes with nutrition, should be guarded against The two things most likely to correct a consumptive tendency in childhood are, first, systematic physical exercise in the open air, and second, change of climate Finally, knowledge of hygienic laws must be diffused among all classes

2 *Medicinal* —Is there a medicinal antidote to tuberculosis? No Nevertheless medicines are important and used for three main purposes, viz improvement of nutrition, to combat complications, and to lessen suffering by meeting the various symptoms which arise Cod liver oil serves as a food, and under its use many cases show remarkable improvement in appetite, digestion and tissue nutrition It is more valuable in the young than the old As regards the use of alcohol, if it produces "a sense of comfort without any excitation of the circulation, or of the nervous system," well and good, but if it occasions "flushing, weariness or discomfort of any kind," it does harm

Cough, expectoration and the rapidity of emaciation are progressive with the fever Its reduction is a necessity, and the most reliable agents are sulphate of quinin and rest An expectorant cough should be aided in every way A superfluous cough is best relieved by codein For night sweats, I recommend picrotoxin, and for diarrhea especially if dependent on ulceration, the hypophosphites of lime and soda, bismuth, resorcin, etc, are sometimes markedly beneficial

3 *Climatic* —The whole subject will allow of no fixed rules 1, a good climate must be one of a different nature than that in which the disease originated, 2, a moist air, with a sandy, porous soil, is preferable to a dry air with a clayey, non-porous soil, 3, pure air is absolutely best, and pure air means *absence of dust*, hence 4, altitude is beneficial simply because of freedom of rarified air from dust, not that altitude itself has any curative effect, 5, an uninhabited region is best, 6, the question of a hot or a cold climate is to be determined by the circumstances of the case, 7, the good effects of a change are in a vast measure due to the attention paid to sanitary laws

Diet is of great importance

The Amick treatment and "gaseous enemata" were referred to and summarily condemned

The older treatments, as far back as the days of Galen, were gone over, and the paper closed with the statement that our predecessors made about as much progress in treatment as have we with our boasted advantages and increased facilities for pathologic investigation

Dr O W Sherwin of Woodstock, presented a paper (prize paper) entitled

SEPTICEMIA

He said the most common causes of septicemic infection are the microbes and ptomaines of putrefaction and suppuration, and septicemia must be considered to be a warfare between these microorganisms and the body cells

He said septicemia shows four forms or degrees, namely, fermentation fever, sapremia, progressive sepsis and pyemia, detailing at length the etiology and symptoms He placed special stress on prophylaxis, and urged the necessity of precision in the use of the terms asepsis, antisepsis and disinfection He considered treatment in pyemia as of no avail

Dr E M Pond of Rutland, read a paper (prize paper) on

PERITONITIS

He classified the causes of peritonitis as 1, traumatic, 2, infective Under the first head we have intestinal obstruction, ectopic gestation, perforation of stomach or intestines and appendicitis

Infective cases may follow labor or abortion, and many are caused by gonorrheal infection

In tubercular peritonitis, laparotomy is the only treatment

In nearly all traumatic cases early operative measures are necessary

In appendicitis, operation is indicated 1, when symptoms of diffuse general peritonitis are rapidly developing, 2, when the onset of symptoms are violent and signs of septicemia are present, 3, when there is a well defined tumor that is increasing, even if pulse and temperature are improving, 4, when the symptoms are increasing beyond a time when they should be improving, 5, in chronic relapsing appendicitis—in most of these cases a tumor is present which does not disappear between the seizures, 6, when abscesses develop

At no time should the use of opium be pushed so as to mask the symptoms

Dr Horace Tracy Hanks of New York, read a paper entitled

THE PALLIATIVE AND RADICAL TREATMENT OF FIBRO-MYOMATA OF THE UTERUS

After giving a description of the different varieties of fibroid tumors, he said that for the sub-mucous variety, he used ergot or electricity to produce uterine contraction, so as to force a pedunculated tumor through the external *os*, or to destroy its growth in the uterus if it is sessile

In case of an interstitial tumor which is approaching the endometrium, there will generally be excessive hemorrhage Slight dilatation of the cervix should be resorted to, for complete diagnosis, and to allow the curette to pass easily, and it should be thoroughly used and followed by careful irrigation

The galvanic current should then be employed This will generally check the growth and prevent excessive hemorrhage

In the sub-peritoneal variety, ergot and galvanism should be given a thorough trial, and a major operation, most certainly an hysterectomy is not demanded, unless the patient is a great sufferer from the discomfort produced from the size of the tumor, or from excessive hemorrhages which can not be controlled

Dr Hanks then described at length the operation of supra-pubic hysterectomy, in which he urged the necessity of thorough asepsis

First Day—Evening Session

Dr H R Wilder of Swanton, delivered the President's Annual Address Dr Wilder dwelt upon the value of society organization to the profession in this and in every State, and urged the thorough enforcement of the license law, as it stands on our statute books, recommending the examination of all candidates, without reference to former credentials

He advised the amending of our Code so as to permit physicians to consult with members of other schools, provided they be men of rectitude and of sufficient intellectual worth to make it practicable

He urged young physicians to remember the "vis medicatrix naturæ," and to be not over free in the use of drugs

The address closed with an urgent appeal to all members of the profession to stand in unity

Dr J H Linsley of Burlington, read a paper entitled,

TUBERCULOSIS, WITH LANTERN DEMONSTRATIONS OF PHOTO-MICROGRAPHS

He said Fifteen per cent of all deaths in the civilized world are due to pulmonary tuberculosis This fact should be a sufficient stimulus for unflagging efforts on the part of every medical man, to contribute his mite in the effort to advance the prophylaxis and therapeutics of this formidable enemy of mankind

The bacillus tuberculosis of Koch is the sole and invariable cause of this disease Without this microorganism, there is *never* tuberculosis

The continued presence of tubercle bacilli in the discharges is usually the first evidence of tuberculosis, and these microorganisms can, many times, be detected before the existence of this disease is suspected, or at least, evidenced by other symptoms They may be detected by any physician who has had a reasonable amount of practice with the microscope

There is as yet no accepted specific for treating consumption The non specific method consists of all those measures which tend to strengthen the natural resistance of the system, improve nutrition and efface that special nutritive vice which is so pronounced an element of 'susceptibility" A prolonged residence in an invigorating climate, an open air life, *rest* careful and even forced feeding, cod liver oil, arsenic, creasote and all reconstructive measures are grouped under this head The paper was illustrated by a series of pictures from lantern slides, made from photo-micrographs, thrown on a screen

After adjournment the annual banquet was held at the Bates House, at which 125 covers were laid

(To be continued)

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

AUGUSTIN H GOELET, M D , President

(*Continued from page 867*)

ELECTROLYSIS IN THE TREATMENT OF TUMORS OF THE BLADDER

Read at the Third Annual Meeting of the American Electro Therapeutic Association, in Chicago Sept 12 1893

BY ROBERT NEWMAN, M D
NEW YORK
Fellow and Member Executive Council American Electro Therapeutic Association Consulting Genito Urinary Surgeon to German Dispensary West Side and Hackensack Hospital, Consulting Surgeon Bayonne Hospital Consulting Physician to Home for Aged and Infirm Yonkers Honorary Member Ulster County Medical Society Danbury Medical Society, etc

Electricity has done much to make the treatment of tumors of the bladder more successful than the means formerly employed It can be used in three different forms 1, electric light to make the diagnosis positive , 2, galvano cautery to remove the tumor wholly or in part , and 3, electrolysis for the removal or absorption of the tumor by degrees while the patient is perambulent

Radical operations have been made by supra-pubic cystotomy and removal of the tumor, either by exsection or by galvano cautery

The present paper will illustrate only methods the author has employed with electrolysis, in such a manner that the patients were not detained from business or pleasure, came to the office for treatment and went home after the séance, sometimes necessitating travel by rail Most patients were females, but the principles employed can also be used in males The only difference in treating males consists in having the instruments made a little longer to comply with the anatomic differences Only non malignant tumors are treated in the manner described

Non-Malignant Tumors of the Bladder—have been described by many authorities, which to cite here would be out of place Recently an excellent paper on this subject has been written by Dr John B Hamilton,[1] which is a concise essay, almost exhausting the subject, and giving much information The authors cited there are Stein, Thompson, Tuffier, Ricard and Bousquet Watson Southan, Dittel, Wallace, Perregaux, Jewett, Norton, Guyon, Barling, Spanton and Kelly We find in this paper the very good classification of non-malignant tumors by Barling, the history, etiology, pathology, symptoms, diagnosis treatment and statistic tables The treatment described is surgical, but not a word is said about the use of electricity Hence all which can be found in the literature on the subject is omitted here, and only the methods of electricity employed by the author, and his instruments used, will be described and considered now

The tumors which appear in the bladder are of a different character, as enumerated by Barling Goulson and others Tumors which came under the author's observation were mostly papillomata, myomata and vascular (angiectasia venosa)

Diagnosis —The malady is suspected by certain symptoms as pain, irritability, frequent micturition, chills, insomnia, general malaise, hematuria in intervals, sudden retention and the abnormal state of the urine

I —OCULAR INSPECTION

A diagnosis of tumor can only be made with a certainty by ocular inspection of the bladder by the cystoscope and endoscope The cystoscope of Leiter is illuminated by a storage battery, and if successful the experienced operator will see the tumor, rather a little magnified, as plainly as in a good bright daylight The cystoscope will not be always successful, but when it reveals the tumor, the diagnosis is a certainty To verify such a diagnosis made, the author uses also the old Desormeaux endoscope immediately after the cystoscopic examination If the same condition is seen as found before by the cystoscope, the location of the tumor is verified by an exact measure , how far the tumor is situated from the meatus, and how far it is situated either right or left of the median line If such a measure is taken carefully and embodied in the notes of the case, the tumor can be found again with any instrument to be employed hereafter The writer has used the endoscope of Desormeaux since 1866 in diseases of the urethra and bladder In examination it shows the parts as they really exist at the end of the endoscopic tube, and thus can be reached in loco with instruments and solutions, but only to the extent of the focus in sight , other places may be reached by changing the tube to another focus The diagrams shown here will explain best the endoscope which has been used very little by the profession The advantages of the cystoscope are, that it gives a better light, magnifies the parts, and the whole bladder can be explored, giving at once a large field in focus , but it serves only as a means for diagnosis

For direct ocular inspection, Dr R T Morris has invented an excellent endoscopic tube, which is very simple , the light is thrown into it through a head mirror The management of either appliance needs some practice So far, the author has had the best results, and was enabled to make a positive diagnosis by employing both the cystoscope and endoscope in succession, as also before and after using electrolysis Other examinations for diagnostic purposes are made by exploring the bladder with a bougie à boule or a sound, by injection or irrigations of the bladder, in order to find the capacity of the viscus, the state of the walls, its mucous linings, abnormal contractions, and the sensibility of the patient

Benign Tumors in the bladder may be of different varieties, as mentioned in text-books

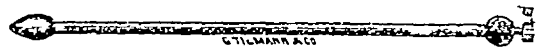

FIG 1,—Electrode for local and general electrolysis

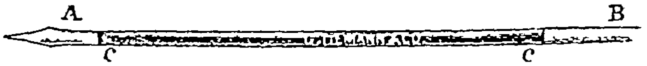

FIG 2 —Platinum needle

A, platinum point B, for connection with battery C C parts insulated.

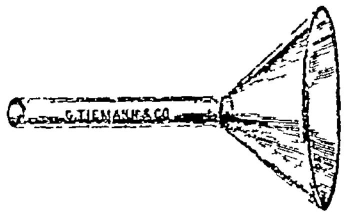

FIG 3 —Glass speculum, urethral

The tumors have been cured by electrolysis per urethram, and therefore pathologic and microscopic specimens could not be procured

Treatment —Concomitant with the electrolysis, or as a preparatory treatment measures are employed to make the patient comfortable To allay pain anodynes are given, best in the form of rectal suppositories and external galvanization The tone of the bladder must be restored and the troublesome spasm conquered Medicated injections washing out and irrigating the bladder are important Systematic and very gradual dilatations of the bladder succeed so well, that the viscus will soon tolerate twelve ounces to a pint, when formerly it could hold scarcely four ounces

II —GALVANO CAUTERY

Will do good service in removing the tumor by degrees After the tumor is well located the galvano cautery instrument is marked by a ring in such a manner that after introduction the platinum wire will cover the tumor in the bladder when that part of the instrument marked by a rubber ring appears at the meatus Then the fenestrum containing the platinum wire is pressed downwards against the tumor, and by pressing the current breaker a few times on a screw, the platinum wire is instantaneously heated from a storage battery The instrument is almost identical with the author's galvano cautery sound, and only differs in being shorter and almost straight at the end The two poles run inside a tube insulated, so that nothing will be heated but the platinum wire situated in the fenestrum The author has never failed to galvano cauterize the exact place wanted, which fact was verified by an ocular inspection with the cystoscope However, if there should be any doubt about the exact situation, the operation can be done with the place to be operated upon fixated, while the bladder is illuminated with the cystoscope In the same manner a galvanocautery sling may be used to remove a tumor at the pedicle

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[1] JOURNAL OF AMERICAN MEDICAL ASSOCIATION, May 20, 1893, p 553

III.—ELECTROLYSIS

May be used in different ways, but always, under all circumstances, a galvanic battery is necessary, no other will do, or in other words, the constant current of a galvanic battery is imperative. As a rule the negative pole is applied to the affected part. The positive pole, in the shape of a pad or a covered carbon, is held in the palm of the hand, or pressed externally over the supra-pubic region.

Each séance may last from five to fifteen minutes, as indicated by method and circumstances. The strength of the current is from 5 to 20 milliampères, an average of 10 milliampères. The intervals of séances are governed by the result of each operation and by the condition of the patient. The first step in the modus operandi is to draw off the urine, which can be done with the urethral glass speculum, Fig 3, which is a very useful auxiliary, as will be shown later. If necessary, the bladder is washed out through the same glass speculum, and at last four to six ounces clear water are left in the bladder. This water may contain a little table salt or bicarbonate of soda, which facilitates the electrolytic action. In most electrolytic operations in the bladder it is of great importance to have the bladder filled with water, and when the cystoscope is introduced the water is a necessity to keep the electric lamp cool. Without the water, the lamp would burn the mucous lining. After these preliminaries, the electrodes are applied, each in its place and the electrolytic action begins, the current being gradually increased from zero to the desired strength.

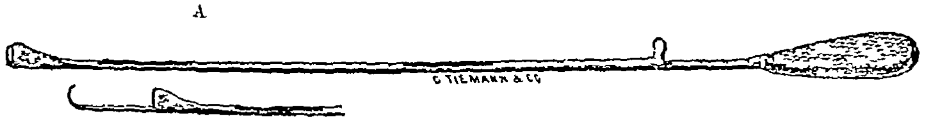

FIG 4.—Vesical tenaculum caché. A, tenaculum covered by the safeguard; B, tenaculum free, safeguard open.

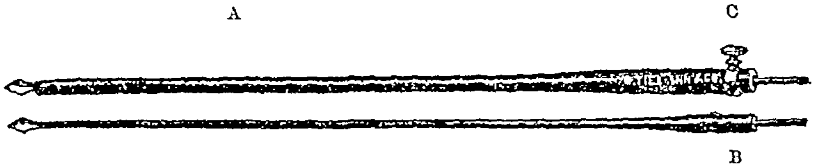

FIG 5.—Cannulated needle electrode.
A, needle in cannula complete; B, needle removed from cannula. C, screw fixing needle.

DIFFERENT METHODS OF ELECTROLYSIS

There are principally two methods, general and localized. 1, general electrolysis is accomplished by holding the electrode bulb in the water which fills the bladder, without touching the tumor. The electrode, Fig 1, is insulated, except at its extremities. One extremity has an olive metal bulb which is introduced as the negative pole per urethra into the bladder and held beneath the water without touching the tumor. The positive pole, in the shape of a pad, is held in the hand or on any cutaneous surface which completes the circuit. Then the current from a galvanic battery is slowly and gradually increased to the desired strength, and the electrolytic work begins—*from the water to the tumor*. It is surprising what good effect this general electrolysis has on the tumor and on the general condition of the patient, it allays pain at once, makes the patient more comfortable, and has a specific, absorbing and healing effect on the tumor. The latter effect is slow but steady.

Other advantages of this method are, that it can be done often, in fact almost daily or in the intervals between other localized operations, which saves time and encourages the patient, who never complains of any pain during such séance. When tumors were almost removed, but a vestige left, which scarcely could be reached locally without encroaching on sound tissue, this method of general electrolysis has done such good service that the case was finally cured; 2, local electrolysis, negative pole against the tumor or penetrating the same: *a*, electrode metal bulb in contact with tumor; *b*, platinum needle in tumor; *c*, fixation of tumor and platinum needle in tumor; *d*, cannulated platinum needle direct in tumor, with or without fixation.

There we have four methods, from which one can be selected according to indications and the work to be done.

a. Electrode metal bulb in contact with the tumor. The same electrode Fig 1, as described in general electrolysis, is also used for this method. The only difference from the former is that the metal bulb is firmly held against some part of the tumor, and in contact with it. After a certain time, when the electrolysis has acted enough in one place, the point of the electrode may be moved to another part of the tumor, and changed successively to different parts.

b. Platinum needle in tumor. This, and the next two following methods, are made on the same principle as the electrolytic treatment of nævus. The negative needle is introduced into the tumor, and then the electrolytic action absorbs or destroys the tumor, this electrolyzed portion shrivels up, contracts, heals by degrees till a healthy surface appears.

The urethral glass speculum Fig 3, is introduced so far into the urethra that its end is near the entrance of the bladder. Into the speculum the platinum needle, Fig 5, is so far advanced that its end is near the opening of the speculum. Then with a quick movement speculum and needle are pushed into the bladder, and at the same moment the needle is pushed forward to be left in the bladder, while the speculum is removed without discharging the water left in the bladder. Then the needle is pierced into a part of the tumor and electrolysis used as before. Sometimes it is a little uncertain where and how deep the needle passes, and in such doubt another method may be practiced. However, an operator who has sufficient experience will overcome such uncertainties, and if necessary he can see the needle's action and location by using at the same time the cystoscope, which has been done.

c. Fixation of tumor and platinum needle in tumor. This and the next method are nearly the same in principle as the last described. The difference is only a greater certainty in the location of the needle, by a new instrument devised by the writer, the Vesical Tenaculum Caché, Fig 4. The tenaculum is protected at the end by a safeguard which can be moved and thereby leaves the tenaculum free. This tenaculum runs in a very slender stem, which when in the urethra occupies little space and permits other instruments to pass alongside at the same time. The tenaculum is introduced; when in the bladder the safeguard is withdrawn and the tumor fixated and held firmly by the tenaculum. Then if the safeguard is pushed forward, the tenaculum can not disengage itself from the tumor and has a steady hold on it. If there is any doubt about the location of the tumor, the cystoscope can be introduced alongside of the tenaculum and the latter can be seen and guided into the exact location desired. Then the cystoscope is removed and the needle introduced, the stem of the tenaculum acting as a guide. Electrolysis is applied, the instruments removed, and if desired the parts may be inspected again with the cystoscope.

d. Cannulated platinum needle direct in tumor. For this method another new instrument is used, the Cannulated Needle Electrode, Fig 5. The needle inside the cannula is fastened by the screw, c, at such a place that the sharp point is covered by the cannula. Then the cannula is introduced in the bladder, and at the same time the needle is pushed forward as far as it can go, Fig 5, *c*, the screw fastened again. In this position the needle fills out the cannula so firmly that no water can escape from the bladder. The point of the needle projects out of the cannula scarcely more than one eighth of an inch. If the needle is now forcibly pushed into the tumor it can not penetrate further than the one eighth of an inch, and therefore can not do any harm. If it is desirable, either the tenaculum or the cystoscope may be used at the same time. However, there is scarcely a necessity for doing so, as the writer always found the exact spot he wanted to penetrate, which was verified by a subsequent inspection with the cystoscope. This instrument proved to be invaluable in these cases for

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

AUGUSTIN H GOELET, M D , President

(*Continued from page 867*)

ELECTROLYSIS IN THE TREATMENT OF TUMORS OF THE BLADDER

Read at the Third Annual Meeting of the American Electro Therapeutic Association, in Chicago Sept 12 1893

BY ROBERT NEWMAN, M D
NEW YORK
Fellow and Member Executive Council American Electro Therapeutic Association Consulting Genito Urinary Surgeon to German Dispensary West Side and Hackensack Hospital, Consulting Surgeon Bayonne Hospital Consulting Physician to Home for Aged and Infirm Yonkers, Honorary Member Ulster County Medical Society Danbury Medical Society, etc

Electricity has done much to make the treatment of tumors of the bladder more successful than the means formerly employed It can be used in three different forms 1, electric light to make the diagnosis positive , 2, galvano cautery to remove the tumor wholly or in part , and 3, electrolysis for the removal or absorption of the tumor by degrees while the patient is perambulent

Radical operations have been made by supra-pubic cystotomy and removal of the tumor, either by exsection or by galvano cautery

The present paper will illustrate only methods the author has employed with electrolysis, in such a manner that the patients were not detained from business or pleasure, came to the office for treatment and went home after the séance, sometimes necessitating travel by rail Most patients were females, but the principles employed can also be used in males The only difference in treating males consists in having the instruments made a little longer to comply with the anatomic differences Only non malignant tumors are treated in the manner described

Non-Malignant Tumors of the Bladder—have been described by many authorities, which to cite here would be out of place Recently an excellent paper on this subject has been written by Dr John B Hamilton,[1] which is a concise essay, almost exhausting the subject, and giving much information The authors cited there are Stein, Thompson, Tuffier, Ricard and Bousquet, Watson, Southan, Dittel, Wallace, Perregaux, Jewett, Norton, Guyon, Barling, Spanton and Kelly We find in this paper the very good classification of non-malignant tumors by Barling, the history, etiology, pathology, symptoms, diagnosis treatment and statistic tables The treatment described is surgical, but not a word is said about the use of electricity Hence all which can be found in the literature on the subject is omitted here, and only the methods of electricity employed by the author, and his instruments used, will be described and considered now

The tumors which appear in the bladder are of a different character, as enumerated by Barling Goulson and others Tumors which came under the author's observation were mostly papillomata, myomata and vascular (angiectasia venosa)

Diagnosis —The malady is suspected by certain symptoms as pain, irritability, frequent micturition, chills, insomnia, general malaise, hematuria in intervals, sudden retention and the abnormal state of the urine

I —OCULAR INSPECTION

A diagnosis of tumor can only be made with a certainty by ocular inspection of the bladder by the cystoscope and endoscope The cystoscope of Leiter is illuminated by a storage battery, and if successful the experienced operator will see the tumor, rather a little magnified, as plainly as in a good bright daylight The cystoscope will not be always successful, but when it reveals the tumor, the diagnosis is a certainty To verify such a diagnosis made, the author uses also the old Desormeaux endoscope immediately after the cystoscopic examination If the same condition is seen as found before by the cystoscope, the location of the tumor is verified by an exact measure , how far the tumor is situated from the meatus, and how far it is situated either right or left of the median line If such a measure is taken carefully and embodied in the notes of the case, the tumor can be found again with any instrument to be employed hereafter The writer has used the endoscope of Desormeaux since 1866 in diseases of the urethra and bladder In examination it shows the parts as they really exist at the end of the endoscopic tube, and thus can be reached in loco with instruments and solutions, but only to the extent of the focus in sight , other places may be reached by changing the tube to another focus The diagrams shown here will explain best the endoscope which has been used very little by the profession The advantages of the cystoscope are, that it gives a better light, magnifies the parts, and the whole bladder can be explored, giving at once a large field in focus , but it serves only as a means for diagnosis

For direct ocular inspection, Dr R T Morris has invented an excellent endoscopic tube, which is very simple, the light is thrown into it through a head mirror The management of either appliance needs some practice So far, the author has had the best results, and was enabled to make a positive diagnosis by employing both the cystoscope and endoscope in succession, as also before and after using electrolysis Other examinations for diagnostic purposes are made by exploring the bladder with a bougie à boule or a sound, by injection or irrigations of the bladder, in order to find the capacity of the viscus, the state of the walls, its mucous linings, abnormal contractions, and the sensibility of the patient

Benign Tumors in the bladder may be of different varieties, as mentioned in text books

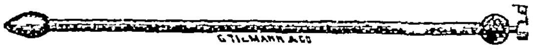

FIG 1,—Electrode for local and general electrolysis

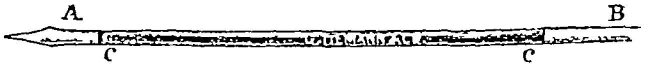

FIG 2 —Platinum needle

A, platinum point B for connection with battery C C parts insulated.

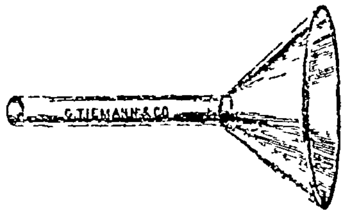

FIG 3 —Glass speculum, urethral

The tumors have been cured by electrolysis per urethram, and therefore pathologic and microscopic specimens could not be procured

Treatment —Concomitant with the electrolysis, or as a preparatory treatment, measures are employed to make the patient comfortable To allay pain anodynes are given, best in the form of rectal suppositories and external galvanization The tone of the bladder must be restored and the troublesome spasm conquered Medicated injections washing out and irrigating the bladder are important Systematic and very gradual dilatations of the bladder succeed so well, that the viscus will soon tolerate twelve ounces to a pint, when formerly it could hold scarcely four ounces

II —GALVANO CAUTERY

Will do good service in removing the tumor by degrees After the tumor is well located the galvano cautery instrument is marked by a ring in such a manner that after introduction the platinum wire will cover the tumor in the bladder when that part of the instrument marked by a rubber ring appears at the meatus Then the fenestrum containing the platinum wire is pressed downwards against the tumor, and by pressing the current breaker a few times on a screw, the platinum wire is instantaneously heated from a storage battery The instrument is almost identical with the author's galvano cautery sound, and only differs in being shorter and almost straight at the end The two poles run inside a tube insulated, so that nothing will be heated but the platinum wire situated in the fenestrum The author has never failed to galvano cauterize the exact place wanted, which fact was verified by an ocular inspection with the cystoscope However, if there should be any doubt about the exact situation, the operation can be done with the place to be operated upon fixated, while the bladder is illuminated with the cystoscope In the same manner a galvano-cautery sling may be used to remove a tumor at the pedicle

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[1] JOURNAL OF AMERICAN MEDICAL ASSOCIATION, May 20, 1893, p 553

III—ELECTROLYSIS

May be used in different ways, but always, under all circumstances, a galvanic battery is necessary, no other will do, or in other words, the constant current of a galvanic battery is imperative As a rule the negative pole is applied to the affected part The positive pole, in the shape of a pad or a covered carbon, is held in the palm of the hand, or pressed externally over the supra-pubic region

Each séance may last from five to fifteen minutes, as indicated by method and circumstances The strength of the current is from 5 to 20 milliampères, an average of 10 milliampères The intervals of séances are governed by the result of each operation and by the condition of the patient The first step in the modus operandi is to draw off the urine, which can be done with the urethral glass speculum, Fig 3, which is a very useful auxiliary as will be shown later If necessary, the bladder is washed out through the same glass speculum, and at last four to six ounces clear water are left in the bladder This water may contain a little table salt or bicarbonate of soda which facilitates the electrolytic action In most electrolytic operations in the bladder it is of great importance to have the bladder filled with water, and when the cystoscope is introduced the water is a necessity to keep the electric lamp cool Without the water, the lamp would burn the mucous lining After these preliminaries, the electrodes are applied, each in its place and the electrolytic action begins, the current being gradually increased from zero to the desired strength

DIFFERENT METHODS OF ELECTROLYSIS

There are principally two methods, general and localized 1, general electrolysis is accomplished by holding the electrode bulb in the water which fills the bladder, without touching the tumor The electrode, Fig 1, is insulated, except at its extremities One extremity has an olive metal bulb which is introduced as the negative pole per urethra into the bladder and held beneath the water without touching the tumor The positive pole, in the shape of a pad, is held in the hand or on any cutaneous surface which completes the circuit Then the current from a galvanic battery is slowly and gradually increased to the desired strength, and the electrolytic work begins—from the water to the tumor It is surprising what good effect this general electrolysis has on the tumor and on the general condition of the patient, it allays pain at once, makes the patient more comfortable, and has a specific, absorbing and healing effect on the tumor The latter effect is slow but steady

Other advantages of this method are, that it can be done often, in fact almost daily or in the intervals between other localized operations, which saves time and encourages the patient, who never complains of any pain during such séance When tumors were almost removed, but a vestige left, which scarcely could be reached locally without encroaching on sound tissue, this method of general electrolysis has done such good service that the case was finally cured, 2, local electrolysis, negative pole against the tumor or penetrating the same *a* electrode metal bulb in contact with tumor, *b*, platinum needle in tumor, *c*, fixation of tumor and platinum needle in tumor, *d*, cannulated platinum needle direct in tumor, with or without fixation

There we have four methods from which one can be selected according to indications and the work to be done

a Electrode metal bulb in contact with the tumor The same electrode Fig 1, as described in general electrolysis, is also used for this method The only difference from the former is that the metal bulb is firmly held against some part of the tumor, and in contact with it After a certain time, when the electrolysis has acted enough in one place, the point of the electrode may be moved to another part of the tumor, and changed successively to different parts

b Platinum needle in tumor This, and the next two following methods, are made on the same principle as the electrolytic treatment of nævus The negative needle is introduced into the tumor, and then the electrolytic action absorbs or destroys the tumor, this electrolyzed portion shrivels up, contracts, heals by degrees till a healthy surface appears

The urethral glass speculum Fig 3, is introduced so far into the urethra that its end is near the entrance of the bladder Into the speculum the platinum needle, Fig 5, is so far advanced that its end is near the opening of the speculum Then with a quick movement speculum and needle are pushed into the bladder, and at the same moment the needle is pushed forward to be left in the bladder, while the speculum is removed without discharging the water left in the bladder Then the needle is pierced into a part of the tumor and electrolysis used as before Sometimes it is a little uncertain where and how deep the needle passes, and in such doubt another method may be practiced However, an operator who has sufficient experience will overcome such uncertainties, and if necessary he can see the needle's action and location by using at the same time the cystoscope, which has been done

c Fixation of tumor and platinum needle in tumor This and the next method are nearly the same in principle as the last described The difference is only a greater certainty in the location of the needle, by a new instrument devised by the writer, the Vesical Tenaculum Caché, Fig 4 The tenaculum is protected at the end by a safeguard which can be moved and thereby leaves the tenaculum free This tenaculum runs in a very slender stem, which when in the urethra occupies little space and permits other instruments to pass alongside at the same time The tenaculum is introduced; when in the bladder the safeguard is withdrawn and the tumor fixated and held firmly by the tenaculum Then if the safeguard is pushed forward, the tenaculum can not disengage itself from the tumor and has a steady hold on it If there is any doubt about the location of the tumor, the cystoscope can be introduced alongside of the tenaculum and the latter can be seen and guided into the exact location desired Then the cystoscope is removed and the needle introduced, the stem of the tenaculum acting as a guide Electrolysis is applied, the instruments removed, and if desired the parts may be inspected again with the cystoscope

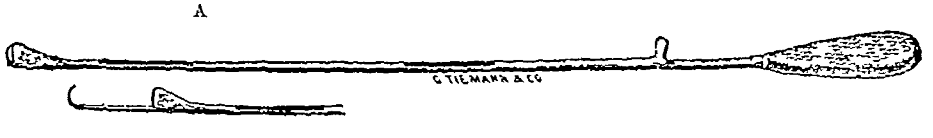

FIG 4—Vesical tenaculum caché A, tenaculum covered by the safeguard B tenaculum free, safeguard open

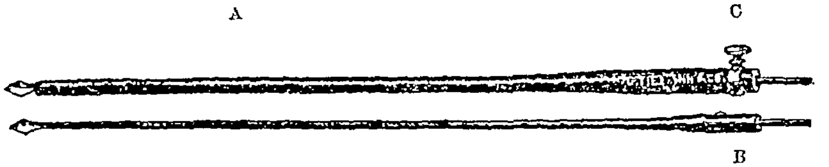

FIG 5—Cannulated needle electrode
A needle in cannula complete B, needle removed from cannula C, screw fixing needle

d Cannulated platinum needle direct in tumor For this method another new instrument is used, the Cannulated Needle Electrode, Fig 5 The needle inside the cannula is fastened by the screw, *c*, at such a place that the sharp point is covered by the cannula Then the cannula is introduced in the bladder, and at the same time the needle is pushed forward as far as it can go, Fig 5, *c*, the screw fastened again In this position the needle fills out the cannula so firmly that no water can escape from the bladder The point of the needle projects out of the cannula scarcely more than one eighth of an inch If the needle is now forcibly pushed into the tumor it can not penetrate further than the one eighth of an inch, and therefore can not do any harm If it is desirable, either the tenaculum or the cystoscope may be used at the same time However, there is scarcely a necessity for doing so, as the writer always found the exact spot he wanted to penetrate, which was verified by a subsequent inspection with the cystoscope This instrument proved to be invaluable in these cases for diagnosis and treatment It is hoped that it will be still more improved, so that it will be easier to inspect and operate at the same time

The new instruments here demonstrated have contributed greatly to the success of operation These instruments have been devised by the author as necessity required

In most cases it will be necessary to use both local and general electrolysis, the method to be selected according to indications

CONCLUSIONS

1 Tumor of the bladder in the male can be treated by electrolysis, but in most cases it will be preferable to perform supra pubic cystotomy and remove tumor by galvano cautery, electrolysis or the knife for a radical cure

2 The methods here described for tumors of the bladder have been used in females in *non* malignant tumors A galvano battery only must be used

3 All operations have been made per urethra, without any assistant, without any anesthetic, without any pain, without any detention, patients being perambulent, coming and going as they pleased

4 The result having been very satisfactory, patients acknowledging a cure, and in some cases reliable physicians having made examinations and pronounced patient cured

5 While the result has been favorable, it is not asserted that electrolysis will cure all benign tumors of the bladder

DR HOLFORD WALKER of Toronto, asked if the author had any experience in the treatment of enlarged prostates by this method

DR NEWMAN replied that his experience had been confined to treating females by this method In males, suprapubic cystotomy is ordinarily better than electrolysis for bladder tumors

DR GREEN said he had made applications to enlarged prostates, and in the majority of his cases he had been pleased with the result

DR MARTIN had had no experience with this class of cases, but was prepared to believe thoroughly in anything advocated by Dr Newman

DR ENGLEMAN said that the author was to be complimented on using the true surgical principle of seeing the spot before attacking it He was astonished to learn that the treatment could be carried out with such facility, and with almost no restrictions imposed on the patient

DR NEWMAN, in closing the discussion, said that patients with such bladder tumors suffer excruciating pain One case came to him the first time in a carriage, and walked into his office very slowly and with much difficulty, but was soon decidedly relieved He did not wish to convey the impression that the treatment was so very easy, for it is often difficult to manipulate the tenaculum and other instruments properly He always felt that he needed the patient's consciousness to guide him

ON INVESTIGATION OF DR NEWMAN'S STATISTICS

We have examined the records of Dr Newman's cases of urethral stricture submitted to us, and regard his conclusions as well sustained by the statistics he has presented, and as far as our experience in this line of work adds further testimony, it is confirmatory of the value of the continuous current in resolving a large class of urethral strictures

The Committee made diligent efforts during the year to comply with the directions given them, to enlist the cooperation of surgeons of large experience in other methods of treatment of urethral stricture in examining both the patients and statistics, but failed to receive such assistance from them

A H GOELET
WILLIAM J MORTON
Chicago, Sept 11, 1893 W J HERDMAN

ADDENDA TO REPORT OF COMMITTEE ON ELECTRODES

DR WM J MORTON of New York, exhibited some new electrodes which he had found especially useful First, an ordinary large circular dispersion electrode was shown, to which was adapted a circular cap of soft rubber This cap could be fitted to electrodes of any size, and its rim which turned over upon itself, served to collect the fluid which escaped from the electrode, and which would otherwise soil the patient's clothes He then showed the way in which he wrapped his carbon electrode with "punk," by wrapping the disc in the punk, tying it securely by a wire wound in a groove, encircling the rim of the electrode, and finally trimming off the superfluous punk He found this material most agreeable to the patient, and it had the very valuable property of retaining moisture for a long time The third piece of apparatus was a cataphoric electrode, consisting of a hollow box of ebonite, the bottom of which was formed by a disc of block tin This was covered as in other electrodes of this class, with a thin disc of blotting paper The hollow ebonite portion is filled with the solution to be employed, and this is gradually fed through perforations in the tin plate on to the blotting paper The object of this special construction is to enable the operator to use a larger quantity of the solution than could be placed directly on the blotting paper, and at the same time to reduce to a minimum the space between metallic and electrolytic conduction This latter point is of extreme importance in practice Lastly the speaker showed an intra-uterine electrode which he had been compelled to have made to order, as nothing of the kind could be found at the instrument-makers He did not claim originality in its construction, but exhibited it simply on account of its utility in the Apostoli method of intra uterine treatment The essential points in construction were, increasing the length of the intra-uterine portion of the sound, and providing an interval or insulated area corresponding to the cervical portion of the sound By this device a large portion of the current was prevented from being absorbed by the cervix It also possessed a ring of ivory to act as a guide to the depth to which it was to be inserted, and lastly its tip was insulated by hard rubber Though in no sense novel in any one feature the combination seemed to offer a practical working electrode

The report was accepted and the Committee continued

(To be continued)

New York County Medical Association —At a meeting of the New York County Medical Association held Nov 20, 1893, Dr Samuel E Milliken presented three patients on whom he had operated for the radical cure of varicocele by the excision of all the diseased veins These three, he said, belonged to a series of seven successful cases in which he had performed the operation He expressed the opinion that in this procedure there was no occasion for excising the lower end of the scrotum, as advocated by many surgeons of repute Dr Milliken then exhibited an apparatus for the application of the plaster-of-paris jacket in Potts' disease, while the patient was in a recumbent position, and in connection with the demonstration made some remarks on "Immobilization *versus* Extension" The principal paper of the evening was by Dr Augustin H Goelet, on the 'Treatment of Uterine Fibroids" At the conclusion of the discussion on the paper, the following resolutions in regard to the death of Dr William T White, late Vice-President of the Association, were adopted

The New York County Medical Association, in recognition of the services of Dr William Thomas White, a deceased member, desires to dedicate to his memory upon its minute book the following tribute

Resolved That this Association acknowledges in all his labors so unstintedly offered, the spirit of exact justice and honest purpose of the best interests of the profession

Resolved, That his unimpeachable candor, fortified by a rare courage and a strict construction of the right, was not allowed by him to degenerate into a mere love of conflict, or to obscure his underlying amiability

Resolved That, accompanying the above, a brief biographical sketch be likewise added to the archives as a reference for the preparation of a future memoir

Society of Surgery of Paris —The Société de Chirurgie of Paris, recently celebrated the fiftieth anniversary of its foundation All the members were present and a great many associates and foreign associate members The Chair of Honorary President was occupied by M Marjolin, one of the founders of the Society M Verneuil was active Presbury in January, 1804, and removed to New Haven in 1845 He was a graduate of Yale Medical School He wrote a his-dent, and was assisted by MM Perier, Monod, Kirmisson, Schwartz, Larrey, Brouardel Boeckel (Strasbourg), Reverdin (Genève) and Sir Spencer Wells of London The session was opened by M Marjohn who was made the object of a most sympathetic ovation He was also presented a medal commemorative of the ceremony —*Noveaux Remèdes*, Nov 8, 1893

At the last meeting of the *Section on General Medicine* of the New York Academy of *Medicine*, there was a discussion of unusual practical interest, participated in by some of the most prominent teachers and practitioners of the city, on "Therapeutic Instability," illustrated by pneumonia and typhoid fever, with special reference to dietetics and specifics, cardiac and general stimulants, and antipyretics It was opened by a paper on the statements made in leading works on medicine of the past twenty-five years, by Dr Wm L Stowell, who gave a carefully prepared résumé of the teachings of American, English and Continental authorities from Chambers, in 1866, down to Hare's "System of Therapeutics" and Osler's "Practice," and wound up by quoting Horatio C Wood's observation that the modern practice of medicine is a mixture of science and empiricism The other speakers were Drs Wm H Draper, A A Smith, George L Peabody, Simon Baruch and Charles E Quimby, the Chairman of the Section Dr Alfred L Loomis, who was to have discussed the subject of "Antipyretics," was prevented by illness from being present, but some of the others referred to the *question in the course of their remarks* Thus Dr Peabody, whose topic was "Accepted Teachings of To day," *expressed the opinion that the* use of antipyretic drugs, *in doses sufficient to* reduce the temperature, is absolutely unjustifiable in pneumonia When there *is hyperpyrexia, it is his practice* to resort to the Brandt method of cold baths in this disease In typhoid fever, he stated that this method was rapidly superseding all *others, and that* he believed it was worth more than all the other *means of* treatment employed in the last twenty years Drs Smith and Baruch also expressed themselves as *enthusiastically in* favor of the cold baths, the latter stating that the only remedies *commended* during the discussion of the evening which he found *mentioned* in Hippocrates were *the hygienic* ones, dietetics and baths This, *he thought*, was good evidence of the stability of these *remedies All the* speakers conceded the first place to alcohol, as a *cardiac* and general *stimulant although* agreeing that it should *not be used* so indiscriminately, or in such large quantities, as it was twenty or twenty five years ago Quinin, which was formerly given in such enormous doses, is still regarded as a useful agent if not prescribed *in larger quantity* than six or eight grains a day Digitalis, which declined in favor for some time, is now gaining again, and the *same* is true of oxygen In speaking of the use of the latter in *pneumonia, Dr Peabody* said that he thought it was of service *when there* was dyspnea due to an involvement of a large amount of lung tissue, but not otherwise Strychnia, which was scarcely at all used a few years ago, has been rapidly growing in favor as a tonic and *stimulant*, and now holds a deservedly high place Caffein is also looked *upon* at the present time as a very valuable agent *Opium* still holds its own, not only as an alleviator of pain, but as a tonic and *stimulant* (if given in proper quantity and not continued for too *long* a *time*), *and* Dr Smith placed it next after alcohol in this capacity The *preparations of ammonia*, *which* were *formerly* so generally employed, have *now* been pretty nearly abandoned, with the exception *of the aromatic* spirits, which does not produce the same digestive disturbance as the others The ethers and camphor have also been found lacking As to intestinal antisepsis in typhoid, the results *thus* far have been disappointing but the hope was expressed that in the future some means would be discovered not for *destroying* the germs of the disease, but for antagonizing the septic alkaloids to which they give rise in the system In short, as Dr Peabody remarked, we have at the present day, in pneumonia and *typhoid, entirely* a matter of intelligent, expectant and symptomatic treatment

CORRESPONDENCE

The McDowell Biography

[A Card from the granddaughter of Ephraim McDowell, M D]

To the Editor —Members of the medical profession and others, who have kindly subscribed to my work, "The Biography of Ephraim McDowell, M D ," *and* who have not yet received their copy, are hereby notified that the delay has been unavoidable, owing to the magnitude of the undertaking, the necessity of my securing a certain number of subscribers before I could publish the second edition, and my desire to thoroughly revise the work and incorporate new articles of interest gathered since the issue of my first edition, which was exhausted before all orders could be filled

I have now nearly completed this revision, and hope to have the new edition published and delivered in the early part of the new year

As I will have to make my deliveries in the consecutive order in which the subscriptions were taken, I *must ask the* indulgence of subscribers until they receive their copy

Very respectfully,
Mrs M T Valentine,
Formerly Mrs Mary Young Ridenbaugh,
Granddaughter of Ephraim McDowell, M D.
P O Box 92, Philadelphia, Pa Nov 27, 1893

NECROLOGY

Dr O M Ballard, Hancock, N Y , died November 17

Dr J J Krebs, Clearspring, Md , died November 24

Dr Leland A Babcock died at Chicago, November 29

Dr I H Wright, Neenah, Wis , aged 80, November 29

Dr P F Collins, Cumberland Co Ind , December 1

Dr Theodore Luebkemann, Eau Claire, Wis , November 28

Dr Leander Smith of Lexington, Ky , died November 18

Dr W H Pollard of Fort Worth, Texas, died, aged 82, November 23

Dr J S Wright, for eighteen years a practicing physician of Newton, Iowa, died November 24, of apoplexy

Dr G R Parsons, who had been confined to his bed several weeks, died at Kerrville, Tex , on November 27

Dr John P Crichton, an old resident of Atlanta, Ga , died November 17, *after having* been in feeble health for a year *or more*

Dr Isaiah Josiah Willis Rowe, an old resident, died at Gorham, N H , at the advanced age of 79 years He was a son of Ephraim and Lavina Rowe of Bethel, and was born in that town Oct 19, 1814, and moved to Gorham in 1857

Dr James Calder died at his *home in Harrisburg*, aged 67, November 24 He was *once a missionary* to China, and served at different periods as President of the State College at Bellefonte, the Hillsdale, (*Mich*) College and the Shippensburg *Collegiate Institute*

Dr Herbert J Pomroy, a *physician in Providence*, and a son of Collector of Port Gorham Pomroy, died suddenly November 27 He was 38 years of age, and a graduate of Harvard He was a member of *the State Board of Charities*, Providence Press Club, Rhode Island Yacht Club and other associations in that city

Dr Henry Bronson, New Haven, Conn , died November 26. He was an invalid for many years, and was born in Water-tory of Waterbury and a number of articles on political economy topics It is said that he leaves an estate valued at $1,000,000

George B Boyd, M D, aged 64 years, graduate of Jefferson Medical College, Philadelphia, and surgeon in Military Hospital during the war, was found dead in bed at his home, Scranton, Pa, November 27, having passed away suddenly from cerebral hemorrhage He was one of the founders of Lackawanna Hospital and a prominent member of the Lackawanna Medical Society

Dr Robert McNutt, a veteran surgeon of the Union Army and a man of superior literary and scientific acquirements, died at Des Moines, Iowa, December 2, aged 67 years He was practicing his profession in Alabama at the outbreak of the Rebellion, and, being a loyal Union man, he was subjected to great persecution, but succeeded in escaping to the Federal lines, and was appointed surgeon of an Iowa regiment

Dr J H L St Germain, a practitioner of Ste Hyacinthe, Canada, died rather suddenly in that town on November 23 He was sixty years of age and had suffered for some time from heart disease Born in 1833, at Repentigny, he was educated at Ste Hyacinthe, and after his university course graduated in 1854 For thirteen years he practiced at Stanfold, and in 1890 settled down at Ste Hyacinthe For several years he occupied a seat in the City Council He was the author of several works in medicine, and was a member of the College of Surgeons and Physicians of the Province of Quebec, and had been the founder and first president of the Medico Chirurgical Association of the District of Ste Hyacinthe

Dr William Gray Palmer, one of the best known physicians in Washington, died Nov 23, 1893, at his residence, 1700 13th Street, in the seventieth year of his age He leaves a wife and five children, two sons in Chicago, and three daughters in Washington

Dr Palmer was one of the oldest practitioners in the District and came of a family of medical men, all of whom attained prominence in the profession He was born in Montgomery County, Md and graduated from the medical school of the University of Pennsylvania, in 1844, at the age of twenty settled in Bladensburg, Md, and in 1850 began practice in Washington He was a member of the American Medical Association

William Henry Jackson, M D, who died suddenly November 25, at his home, 556 Madison Avenue, was born in New York in 1810 He was the son of the late Rev John Frelinghuysen Jackson After graduation from the College of Physicians and Surgeons in 1835, he traveled abroad in company with Dr Valentine Mott While abroad he visited the different hospitals in the large cities and went as far as Egypt, where he made the medical institutions of that country objects of special study On return to this country he was made Head Surgeon of the New York Hospital His close application to study and the duties of his important place so injured his health that he was obliged to give up active practice of medicine and devote himself almost entirely to the lighter care of managing his large estate

Dr Jackson was the oldest member of the College o Physicians and Surgeons, the Historical Society and the St Nicholas Society The last he joined in 1845 He also belonged to the County Medical Society, the Academy of Medicine, the Patria Club and the American Museum of Natural History

Prof John Tyndall died at Haslemere, County of Surrey, Eng, December 4 John Tyndall was born in Ireland in 1820, was appointed to a position in the Ordinance Survey and afterward Teacher of Natural Philosophy at Queenswood College, Stockbridge, and in 1853 Professor of Natural Philosophy in the Royal Institution, succeeding Faraday His first great paper was to the Royal Society on "*Molecular Influences—Transmission of Heat through Organic Structures*" His next papers published in Philosophical Transactions, "On the Vibrations and Tones produced by the Contact of Bodies having Different Temperatures," 1854, "On the Physical Phenomena of Glaciers," 1857, "On Some Physical Properties of Ice," 1858, "On Transmission of Heat through Gaseous Bodies," 1859, Six papers on radiation, 1861–1865, "On Calorescence," 1865, "On the Invisible Radiation of Electric Light," 1865, in 1867 he lectured on "Sounding and Sensitive Flames"

He gave a lecture on 'Dust and Disease," January, 1870, and has written many books, too well known to enumerate here

MISCELLANY

Is a Postmaster—Dr Merton W Brown has been appointed postmaster of Cedarville, N Y

La Grippe is expected again this winter London is reported to have many cases at this time

M Brissaud has been appointed for one year to the charge of the service of the late M Charcot at the Salpêtrière

Mid-winter Doctors—Fourteen young gentlemen were graduated at the California Medical College, November 27

Prof Da Costa—It is a current rumor that Prof J M Da Costa will deliver a course of lectures at the University of Pennsylvania this winter

Dr Gibney's Fire—Dr V P Gibney's house 16 Park Avenue, New York was damaged by fire, on Thanksgiving day Dr Gibney and family were absent in Kentucky at the time

Quarantine Raised—Surgeon Murray, M H S, gave Brunswick double reason for celebrating Thanksgiving by removing the Government *quarantine around the city* November 30

New Hospitals—Dallas, Texas, is to have a Cottage Hospital

The new Mercy Hospital at Des Moines, Iowa, was opene November 28

A Maternity Hospital is to be established at Duluth, Mi

Dr Carlos Montezuma, in charge of the Indian school at Carlisle, who is himself a full-blooded Apache Indian, brought thirty Indian children to the eye department of the Medico Chirurgical Hospital, Eighteenth and Cherry Streets, to be placed under the care of Professor L Webster Fox for bad vision

They Played Foot-Ball—The medical students of the College of Physicians and Surgeons of New York, and of Bellevue Hospital Medical College, played a game of foot-ball at the polo grounds The game was won by the College of Physicians and Surgeons, by a score of 8 to 4 The game is said to have been a good one, although nobody was hurt

Women Physicians in the East—The Presbyterian Board of Foreign Missions have succeeded in obtaining permission fo women physicians to practice in Turkey, in connection wit their missionary work Dr Mary P Eddy, the daughter o Rev W W Eddy, is the first to whom the permission ha been accorded

A Wise Braufrau—The only woman in the United States who has won the bubble reputation, as a successful operator of a brewery, has built and given to the German Hospital of Newark, N J, a two story addition to the Hospital to be used as a training school for nurses The building was dedicated on Thanksgiving day with appropriate ceremonies The donor, Mrs Christina Trefz, was present

A New Episcopal Hospital —An estate valued at a million dollars nearly, has been bequeathed to Grace Church, New York, under the will of the late Mrs Mary March, for the establishment of an institution for the relief of the sick, aged and indigent persons belonging to the parish of that church This charity will be known as the John Payne March Memorial Hospital Under the same will a donation will accrue to Bellevue Hospital, New York

Discontinuance of Sanitary Inspectors —In accordance with orders from the Surgeon-General, Marine Hospital Service, the services of the sanitary inspectors who have been on duty on the Canadian and Mexican frontiers during the past summer were discontinued on Nov 1, 1893 The officers of the Marine Hospital Service at Quebec will, however, be kept on duty there until the cessation of immigration at that port

Weight Should Govern the Class —Dr Wm T Porter recently lectured in St Louis on 'Reform in Education" He advocated the grading of all classes in schools by physical weights and measurements instead of by mental capacity He asserted that children who are physically weak are crowded beyond their strength, and that eventually their minds become weaker by this intellectual overcrowding What the French call *surmenage intellectuel*

Mrs Elma A Travis of Mount Vernon, New York, was admitted to practice as a physician at a meeting of the Westchester County Medical Society held at Yonkers, November 21 She has since filed her certificate as a medical practitioner with the county clerk at White Plains, and it is stated that she is the first female physician in Westchester County It certainly seems remarkable that she should be the first representative of the fair sex in the ranks of the profession in Westchester, when one recalls the fact that the county is immediately adjoining that of New York

Medical Training Institute at Agra, India —Dr Colin Valentine, a Scottish medical missionary, is the principal of this school for native young men It is eleven years old and now has a curriculum extending over a period of four years Eighteen students have been in attendance during the past year The students live in the Institute and receive tutorial training from Dr Valentine and an assistant The students attend lectures at the Governmental Medical College of Agra, and receive a degree therefrom when ready for graduation The annual cost for the sustentation of a student is $80

The Czar of Russia recently issued a ukase on medical fees which divides the population into three separate classes, the first one composed of the nobles, the capitalists, the landowners, the manufacturers, the bankers, the principal merchants, and members of the first six classes of the civil, military and naval service The second class comprises lawyers, parsons, and professional men of one kind and another, as well as government employes of the seventh and eighth grades, while class number three is of the remainder of the population For patients of first class the fee is limited under severe penalties to $2 75 for each consultation, for those of the second class to $1 65, while the cost of medical advice to the masses is limited to 19 cents

Ophthalmologists —The Grand Duke Karl Theodore, heir presumptive to the Palatinate of Bavaria, is the director of two eye hospitals, one at Munich and one at Meran, in the mountains, to the south of the capital He does a goodly amount of eye work among the poor He takes no fees, but a box at the door of the consultation room has been arranged to receive voluntary contributions He has now the help of his eldest daughter, the Duchess Sophia, as his chief assistant They both begin the day's work at 7 o'clock in the morning The Hospital in the mountains has the preference with the Surgeon, for there he gets the better results after operations, he spends the larger half of his time at Meran

Drunken Wasps —Mr Lawson Tait, the well-known English surgeon, says that the sugar in certain fruits becomes changed into alcohol during the process of decay, and that wasps sometimes get very drunk thereon On grapes and certain plums he says, "you will see them get very drunk, crawl away in a semi-somnolent condition, and repose in the grass for some time till they get over the 'bout,' and then they will go at it again" Moreover, Mr Tait declares "that they do their worst in stinging, both in the virulent nature of the stroke and the utterly unprovoked assaults of which they are guilty I was stung last year by a drunken wasp and suffered severely from symptoms of nerve poison for several days In such drunken peculiarities they resemble their human contemporaries"—*New York Tribune*

The Fatalities from Foot-ball seem to be increasing On November 21, James O'Brien, a student at Manhattan College, New York, died of peritonitis resulting from injuries received in the game In his case it was ascertained that the diaphragm had been ruptured During the month of November not less than six young Americans have been killed in playing foot ball, and a seventh, John White of Farmington, Conn, received injuries which will probably prove fatal In his case there was a fracture of the spine, and should he recover he will be a cripple for life From the records kept by an English gentleman, recently published in the *New York Herald*, it appears that during the last football season in England there were twenty six fatalities, in the previous season twenty two, and in the season before that twenty-three

Fever at Tarrytown, New York —Dr Hermann Biggs of the New York City Board of Health, has recently reported on a case of fecal contamination of the water supply at Tarrytown He was invited to make a survey of the sources of that supply in consequence of the prevalence of typhoid fever in the town The water is largely drawn from three wells sunk in a marsh, into which several brooks empty from the adjoining hills One brook enters the marsh at a point less than a quarter of a mile distant from the pumping station On this stream there was found a house in which one or two cases of fever had occurred in September The privy belonging to this house discharged directly over the brook Water taken from the brook and from the supply wells gave unmistakable evidences of contamination

Result of Operations at New Orleans —A correspondent in New Orleans writes for the information of members of the Southern Surgical and Gynecological Association who attended the recent session there, that all the operations performed by members at the Charity Hospital resulted in recovery The operations were done through the courteous invitation of Dr Ernest S Lewis and Dr A B Miles, and were as follows abdominal section for occlusive salpingitis and peritonitis, with adhesions, by Dr Joseph Price of Philadelphia, abdominal hysterectomy for uterine myoma, by Dr Howard Kelly of Baltimore, abdominal section for suppurative salpingitis, by Dr L S McMurtry of Louisville, supra-pubic cystotomy for chronic cystitis, by Dr Hunter McGuire of Richmond, trephining for traumatic epilepsy, by Dr W T Briggs of Nashville All these operations were performed in the operating theater of the Hospital, in the presence of the medical class of Tulane University and members of the Association All the cases passed into easy convalescence without unfavorable symptoms

St Mark's Hospital Will Sell "Patrons'" Bonds to Complete Its Edifice —The corporation of St Mark's Hospital has built a hospital at 177 Second Avenue, which accommodates seventy five patients So far about $50,000 has been raised and expended, and more is needed to carry the charitable undertaking to success In order to raise this money it has been decided to offer patrons' bonds of the value of $10 each, redeemable without interest within twenty years, at the pleasure of the corporation

Attached to each of these bonds are ten hospital coupons, each transferrable and each good for free treatment in the uotdoor department until the discharge of the patient, or good for one day of free hospital treatment, including medical attendance, medicine and board Ten patrons' bonds will entitle the holder to dispose of a free hospital bed for a period of four months on presentation of all the coupons The holder of fifteen bonds can dispose of a bed for six months, and thirty bonds places a bed at the disposal of the holder for a year —*New York World*

Abuse of Medical Charity —Dr Seneca D Powell, who was recently elected President of the Medical Society of the County of New York, delivered his inaugural address on November 27 A portion of it was devoted to expert medical testimony in criminal cases and he made the suggestion that a medical commission should be created to regulate the selection of experts In another part of the address he asked that the Society should take some action in regard to the increasing abuse of free treatment in the hospitals, dispensaries and other institutions of those who were able to pay for medical attendance In relation to this he remarked "A flagrant instance is furnished by the course of the Board of Health in its recent crusades of wholesale vaccinations There is little to be said of the work in Cherry Street and the like, but when employes of prosperous business houses and rich corporations, and even of the moneyed men of the Produce, Stock, and the Consolidated Exchanges and the Board of Trade, the preposterous extent of the abuse, and the consequent professional injury, are seen at a glance "

In reply to the criticism of Dr Powell, the Health authorities state informally that the Board of Health has power to take such measures as it deems best for the suppression and prevention of disease In order to prevent the spread of smallpox it was determined to vaccinate as many persons as possible, and this year the vaccinations performed will amount to over two hundred thousand

Tribute to Dr Abraham Jacobi —American scholarship has received a flattering recognition from the savants of the Old World in the invitation recently extended Dr Abraham Jacobi of New York, to take the Chair of Pedology in the University of Berlin This professorship has been ably filled for a period of twelve years by Dr Hanroch The offer was received by Dr Jacobi in the latter part of October and his answer declining to accept the place was sent the same day by telegraph

Dr Jacobi, who was seen at his home, 110 West Thirty-Fourth Street, by a *Tribune* reporter, said in speaking of the proposition

"I received a letter about five weeks ago informing me that, out of a number of scientific men I was chosen to take Dr Hanroch's place as Professor of Pedology in the University of Berlin Associated with this function is the Children's Clinic at the Charité Hospital, which is the great charitable hospital of Berlin I immediately sent a message of declination by cable It was without doubt a great honor, but I was inspired to refuse the offer because I am an American citizen, and do not care to change my citizenship Besides that, I have my work to do here, and although the offer was a flattering one, still I could not leave a country where I have been so kindly welcomed and so cordially received, as I have been here

"I am bound by every tie of gratitude and affection to remain where I am You will understand what I mean when I tell you that forty years ago I came to this country a poor boy, for I was not much more than a mere boy then I had been imprisoned in Prussia for the part I took in the political revolution which swept nearly over the whole of Europe in 1848 I had nothing but myself and my profession I became a naturalized citizen five years after my arrival here From the first I was kindly received by the members of my profession Almost every position of honor and esteem within the power of the profession to bestow has been given me and I am grateful I have been very happy here in the land of my adoption, and nothing which could be offered me abroad could be a greater source of delight or honor than I have received from my profession here Since my reply declining the place has been received at Berlin, I have received a number of letters urging me to reconsider my refusal But I am contented and happy here in New York I would have nothing especially to gain by accepting, and much to lose

"I look upon this offer as significant of two things first, it proves the universality of the scientific brotherhood, it shows that among men of science there is no question of nationality Second, it shows that there is something in American scholarship worthy of the recognition of the best scientific minds of the world If it were some other American besides myself I would feel disposed to glory over the honor "

Dr Jacobi was born in Hartum, Westphalia, in 1830 He studied at the Universities of Griefswald, Gottingen and Bonn From the latter University he received his degree For taking part in the revolutionary uprising he was convicted of treason and confined in the prisons of Minden and Bielefeld till the summer of 1853 After his discharge Dr Jacobi went to England, and in the following autumn sailed for New York where he has since practiced his profession

In 1861, Dr Jacobi became Professor of Diseases of Children in the New York Medical College, and later, had the same chair in the medical department of the University of the City of New York In 1870 he was made Clinical Professor of the Diseases of Children in the College of Physicians and Surgeons, which chair he still holds —*New York Tribune*

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army from November 25, 1893 to December 1 1893

First Lieut ALEXANDER N STARK Asst Surgeon U S A is relieved from duty at Ft Clark Texas, and will report in person to the commanding officer Ft Sam Houston, Texas, for duty at that post

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending November 25, 1893

Asst Surgeon M W BARNUM, from the "Richmond,' and to the "Kearsarge "

Surgeon J W ROSS from Pensacola Hospital, proceed home and wait orders

Surgeon L B BALDWIN from the "Michigan " and to the Pensacola Hospital

P A Surgeon J S SAYRE to the ' Michigan "

P A Surgeon A C CABELL from the 'Kearsarge " and leave for three months

P A Surgeon G P LUMSDEN, from the ironclads, Richmond Va, and to the Kearsarge '

P A Surgeon F A HESSLER from the ' Vermont " and to the ironclads, Richmond, Va

Asst Surgeon JAMES F LEYS, from the Laboratory Brooklyn, N Y and to the Vermont "

Asst Surgeon M R PIGOTT, from the ' Kearsarge and to the "Richmond

New York National Guard Hospital Corps

Details of its organization prescribed by Adjutant General Porter Adjutant General Porter s order from headquarters regarding the establishment of a Hospital Corps is of interest to the National Guard The Corps is to consist of the hospital stewards of regiments and battalions, and privates to be detailed for this duty

It is specified that commanding officers of regiments shall detail eight privates commanding officers of battalions not part of a regiment shall detail four privates and commanding officers of companies troops and batteries shall detail each one private but no private shall be so detailed except with his own consent and on the recommendation of the senior medical officer of the organization Men may also be specially enlisted for the purpose of such detail but they will be required to drill with their organizations until they are instructed in the school of the soldier To qualify them for their Hospital Corps duties they must follow a course of instruction prescribed by the Surgeon General

At the close of the course of instruction the detailed men of the Corps shall be examined as to their proficiency by a Board to be appointed for that purpose

The uniform of the Corps is to be that prescribed by law and regulations for their respective grades and organizations with the addition that a private of the Corps shall wear on his left arm above the elbow a lozenge of white cloth containing in the center a Geneva cross of red cloth During an engagement or in an emergency the company litter bearers may wear, as a distinguishing mark a brassard of red cloth arund the left arm above the elbow

Commanding officers are now carrying out these orders

LETTERS RECEIVED

(**A**) Ayers D Syracuse N Y, Allen E P, Athens, Pa (**B**) Battey, Dr Robert Rome Ga Brown Dr Bedford Alexandria Va Brown, Moreau R Chicago Blakiston Son & Co Philadelphia, Pa, Baker Co Philadelphia Pa Brown E J, Minneapolis Minn 2 Bacon Dr C S Chicago Ill (**C**) Clum F D, New York City Cleaves Dr M A, New York City (**D**) Dunglison, R J Philadelphia ((**E**) Elliston J Morris Philadelphia Pa (**F**) Farnham F H Detroit, Mich (**K**) Keeley, G G, St Louis, Mo Knapp C P, Wyoming Pa (**L**) Lansing, H C Union Ky Lord & Thomas Chicago Ill (**M**) Mullen, C J Reno, Nev, Murdoch J B Pittsburg, Pa, (**P**) Parsons Dr T S, Lansdowne Pa (**R**) Radnicki, Jos Chicago (**S**) Strong H R, St Louis, Mo Sloan Dr M G, Dexter Iowa (**W**) Walker, James C, New York City Whitford, Wm Chicago

The Journal of the
American Medical Association

Vol XXI CHICAGO, DECEMBER 16, 1893 No 25

ORIGINAL ARTICLES

THE SURGERY OF THE URETERS A CLINICAL, LITERARY AND EXPERIMENTAL RESEARCH

Read in the Section on Surgery and Anatomy at the Forty fourth Annual Meeting of the American Medical Association June 8, 1893

BY WELLER VAN HOOK, A B , M D

PROFESSOR OF SURGICAL PATHOLOGY AND BACTERIOLOGY COLLEGE OF PHYSICIANS AND SURGEONS CHICAGO PROFESSOR OF SURGERY IN THE CHICAGO POST GRADUATE MEDICAL SCHOOL

SYNOPSIS

1 Introductory remarks
2 Anatomical considerations
3 Wounds of the ureter
  A Drainage
  B Bacterial conditions, asepsis, sepsis, *putrefaction*
  C Location pelvis, continuity, outlet (male and female)
  D Relation to injury of other structures
  E Direction of the wound
    1 *Longitudinal*
      a Drainage and its relation to the peritoneum
      b Suture utility and advisability
    2 Transverse wounds
      a Incomplete, drainage suture
      b Complete transverse injury without loss of substance
        1 In the continuity of the ureter Suture *Special devices* The writer's method
        2 At renal extremity
        3 At vesical extremity
      c Complete transverse injury with loss of substance
        1 Urine still made to enter the bladder by
          A Using foreign bodies to produce a connective tissue channel into the bladder
          B By double implantation of the ureter into an isolated knuckle of the bowel
          C The writer s plastic methods *of extending the bladder* to meet the ureter
            a Extra peritoneal method
            b After preliminary transplantation of the peritoneum
          D Rydygier s method of cutaneous ureteroplasty
          E Vaginal plastic methods
        2 Urine discharged extra vesically
          A Implantation *into the skin*
          B Implantation into the vagina
          C Implantation into the small intestine
          D Implantation into the rectum
            a *Historical remarks*
            b Criticism of previous experimental successes
            c A priori *arguments*
              1 From comparative anatomy
              2 *Bacterial condition of rectum*
            d Primary risk of operation
            e Certainty of secondary disaster
            f Liability of stenosis occurring
            g Writer s experiments
            h Procedure to be condemned
        3 Stoppage *of secretion of* urine
          A By ligation of ureter
          B By extirpation of kidney Is it ever *justifiable?*
4 Conclusions
5 Literature

Introduction —The desirability of more readily *applicable* and more complete methods of dealing with the surgical conditions met with in connection with the *excretory ducts* of the kidneys is patent to every one who has *given even the most cursory* attention to the subject The variety of "surgical" conditions brought *about by accidents* and diseases of the ureters is sufficiently large, *and the number of cases* met with is great enough to *make* the subject one of practical interest to *every surgeon* The most obvious of these conditions, injury to the ureter by the penetration of a foreign body, as noted in the remarkable and historic case of the *Archbishop of Paris* in 1848 is nevertheless least frequent of occurrence[31] The practical surgeon is daily confronted with the horror of obstructing, rupturing, crushing or *cutting* a ureter in the course of some abdominal or pelvic operation

Much has already been done in this field of ureteral surgery, and it would be farthest from the present desire to detract from the illustrious efforts of those who like Tuffier, Pozzi, Rydygier, *and Kuester following the pathfinding* footsteps of Simon,[61] have disclosed by clinical and experimental research many important facts in this department of surgery

The *blunt* necessity of closing a ureteral fistula and compelling the urine to traverse its natural channel, in the case of a boy who by congenital defect possessed but one kidney, forced Kuester[29] to devise a means of reuniting the ureter to the pelvis of the kidney after *preliminary resection* The consequent thought is irresistible, that kidneys are not to be sacrificed for fistulæ, partial obstruction by valvular folds causing *intermittent hydronephrosis and strictures* of the ureter *that* interfere *to greater or* less extent with the functional activity of the ducts, without exhausting every effort to correct the *morbid* condition The work of Simon in establishing *the practicability of nephrectomy for fistulæ*, involving as it did the comforting demonstration of the great and sufficient vicarious activity of the kidney after removal of its fellow, has been followed all too literally by modern operators But the time has now come when experimental research, coupled with clinical ingenuity, by demonstrating methods of restoring normal conditions, will render much more difficult the task of justifying the sacrifice of so important an organ as the kidney

The work of those experimenters, Tuffier,[69] Novaro,[37] Gluck and *Zeller*, Harvey Reed[53] and *others, who have* tried to prove the feasibility of rectal implantation of the ureters, has met with *only* a *limited and* qualified success, and I shall show you by incontestible argument and experimental proof, *that the implantation* of the ureter into the rectum *is in* all cases unjustifiable

Under these circumstances,—on the one hand, compelled by necessity to remove disgusting or perilous conditions, and on the other *hand* censured by conscience and a growing conservatism in respect to the important urinary glands, if we sacrifice the kidney,—surgery demands new and better methods of dealing with ureteral wounds and diseases To these demands the writer has devoted *the present work*

Anatomy —The anatomical relations of the ureters have been especially studied by those who have considered means of diagnosis *in ureteral and renal diseases* The names of Pawlik, H A Kelly,[26] Schultz[58] Plique,[51] Pantaloni,[41] Poirier,[46] Perez,[47] Hallé,[24] Fenwick,[18] and G Simon,[61] are especially worthy *of mention in this* connection These men have added *much to our* knowledge of the topographical anatomy of the ureters so that following the *leadership of* Pawlik the ureters are now catheterized, especially in the *female, to* determine the character of the secretion of the kidneys individually, and *operations are performed* upon these ducts which would have been impossible a *few years ago, if* for no other reason, because of insufficient anatomic and diagnostic *information*

The gross and microscopic *anatomy of the tubes* themselves has been well elucidated in the text-books accessible *to all An especially* interesting *account* of the microscopic anatomy of the ureters *is that of Rochard*[56] *My* friend, Dr W M Tanquary, Professor of Anatomy in the College of *Physicians* and Surgeons, has kindly communicated to me several *points which are not* correctly or fully stated in the handbooks

Thus he states, that upon examining the ureters of over twenty *bodies he never* found one over fifteen inches long, the average being between ten and twelve inches in length The ureter when stripped from the peritoneum *may* be drawn out from two to four inches

The curvature of *the* abdominal ureter has its convexity directed inward, while the *convexity of the pelvic* portion is turned outward The pelvic *portion of the* ureter *describes* a very strong curve, almost the arc of a circle, since the duct hugs the bony *wall of the* pelvis very closely Hence the portion of *the ureter opposite the uterus* is at some distance from that organ, and as the ureter approaches *the* base of the bladder (which it enters at a point near the middle of the distance between the urinary meatus and the cervix), it curves rather sharply forward and inward, so that the point in the duct nearest the cervix is below and behind the posterior lip

It must not be forgotten that the ureter has three points of diminution of caliber which may give rise to mistakes in the search for pathologic stenoses The first is between one and a half and two and a half inches from the pelvis of the kidney, according to Dr Tanquary's measurements The second is at the junction of the pelvic and vesical portions The third when present (found in three out of five subjects) is just where the ureter crosses the iliac artery

Nature has protected the ureters in an exceedingly generous way Scarcely another structure in the body is so little likely to be the subject of external violence Poirier[45] has especially noted the distensibility and great resisting power of the ureters Nevertheless such applications of force, as powerful compression of the trunk between two large bodies may rupture the duct Cases of this kind are cited by numerous writers, among whom are Le Dentu,[31] H W Allingham,[1] and Stanley[63]

Wounds of the Ureter —From a study of the anatomy of the ureter, one may see that all the pre requisites to rapid, active regeneration after injury are present The cells of which the ureters are composed are supplied with large easily stainable nuclei, their functional activity being great, their metabolism must be vigorous, and we know that as a rule, cells that have very active metabolism proliferate very freely Moreover, the blood supply of the ureters is everywhere most excellent, so that the growing cells are fully nourished

An excellent demonstration of this vitality and vascularity of the ureter is furnished in a report by Chrobak[10] of a case in which the ureter, although laid bare for an extent of eight cm in the removal of a sub-serous myoma, retained its function without an adverse symptom

The function of the ureter, however, is productive of certain conditions which mechanically interfere with the rapid union of wounds The contractions of the muscular layers of the ureter tend to displace the opposite wound surfaces, while the escape of the urine through the wound, if it be an open one, or the passage of the urine down the duct, if the wound has been sutured or is incomplete, conduces to the same result Since the demonstration by Billroth of the innocuousness of the aseptic urine about twenty-five years ago, less importance has been attached to local chemical irritation by that fluid

As a temporary abrogation of function is usually impossible for the ureter, free exit for the urine either down the natural channel, or outward by way of the new opening, and usually through the posterior abdominal wall, must be of great advantage in healing Drainage of the ureter and of the peri-ureteral space must be of special importance when micro parasitic complications exist, whether this be simple putrefaction of the urine or active suppuration more or less generalized

This condition of wound healing, drainage, can be perhaps most easily satisfied when the wound involves the pelvis of the kidney, since the lumen of the duct is there the greatest When the injury to the pelvis is a perforative one, permitting the escape of urine into the surrounding connective tissue, external drainage is wellnigh imperative This necessity, moreover, is absolute as soon as we have to do with a condition of suppuration or of putrefaction

A study of anatomic conditions in the continuity of the ureteral duct and its outlet serves only to emphasize the importance of drainage, since in these parts of the ureter the lumen of the tube is smaller, and the topographic relations are more complicated

Longitudinal Wounds —Longitudinal rectilinear wounds of the ureter heal, as a rule, very readily, even when no sutures are applied, if they are uncomplicated and drained The constant escape of urine from the wound, as is the case with the urethra, insures union of the lips of the wound by granulation The mucous membrane acts as a barrier to prevent the growth of granulations at points within the lumen of the tube And the proliferation of the epithelia over the granulations tends to increase the lumen of the tube Subsequent contraction can not, therefore, result in injurious interference with the walls of the duct A scar running lengthwise of the ureter could only under rare circumstances do injury by shortening

Tuffier has made elaborate experiments to justify the application of sutures in longitudinal wounds of the ureter He has succeeded in applying a row of delicate transverse interrupted sutures through the outer fibers of the tube, after the analogy of Lembert's intestinal sutures, and has had good results, both as regards union of the wound and the subsequent function of the duct But we can easily see that any suture of the ureter placed transversely and including even a minimum amount of connective tissue, must result in immediate though not necessarily dangerous stenosis, by diminishing the circumference of the tiny cylinder

The practical inference is that longitudinal wounds of the ureter are best treated, *cæteris paribus*, by the method of open aseptic drainage

The absolute clinical demonstration that this is a correct conclusion is furnished by the cases to be referred to hereafter in which Kuester and Fenger, in operations up[illegible] upper part of the ureter, left open longitudinal wounds of the duct and with good posterior drainage obtained ultimate complete closure by granulation, with obliteration of the fistulæ

This rule can not be followed, however, when the wound involves not only the ureter but the neighboring overlying peritoneum, as, e g , in accidental injuries occurring in laparotomy Here, from ample experience in operating transperitoneally upon dogs' ureters, I would recommend the interrupted transverse suture advised by Tuffier, through the outer connective tissue layer of the ureter, including if necessary a minute quantity of the muscular coat of the duct It is important that these sutures be made with very fine silk and very delicate needles The writer uses the ordinary straight seamstress' needles, called No 9, with silk twist selected to easily pass the eye of the needle

The simple technique is as follows Keep intestines and other viscera out of the way with suitable compress Trendelenberg's position is indispensable in work within the pelvis Expose the injured ureter and, if desirable and feasible, have an assistant support or elevate the tube Apply the sutures as already suggested Remove [illegible] the ureter the pressure and tension of the assistant's fingers If after several waves of contraction have passed down the ureter, indicating the passage of the same number of drops of urine, there is observed to be no leakage, the peritoneum must be carefully adjusted about the ureter with accurate sutures This must be done for three re[illegible] peritoneal coat immediately reinforces th[illegible] steadies the ureter and assists in preventi[illegible] ond, the peritoneal membrane very quick[illegible]es to surrounding structures, so that in a few hours the ureteral wound is provisionally healed Third, the rapid regeneration of the histologic elements of the peritoneum insures the speedy definitive healing of the peri-ureteral wound, so that the production of granulation tissue is limited to the utmost, and scar contraction is less likely, in the sequel, to interfere with the lumen of the tube The envelopment of the ureter in peritoneum may be accomplished by either of two methods The first and best is by lifting the tube gently into the cavity of the peritoneum, drawing the serous membrane carefully behind the ureter and, after pulling the peritoneum around the ureter, stitching it in a position to permanently enclose and protect the vessel Secondly, the ureter may also be involved in a completely detached fold of omentum which is loosely attached by a stitch to the connective tissue about the ureter This method is obviously less secure than the first, since the omentum is deprived of its blood supply Tuffier complicates his technique, which does not include my suggestion of a peritoneal covering, by the temporary ligation of the ureter on the renal side of the wound, to prevent the escape of urine until the row of sutures is complete Since the normal urine is not capable of setting up peritonitis or of causing suppuration, this precaution is unnecessary and undesirable It must be carefully observed, however, in the rare abdominal operations upon the ureter in which the urine is known to be septic

Numerous pathologic conditions demand exploration of the ureter by longitudinal incision or treatment by drainage through such a wound The scope of the present work does not permit a detailed study of the pathology of the ureters The writer commends for study in this department, the works of Assmuth,[2] Neilson,[36] Biard de Bordeaux, Schmitt,[60] Le Dentu,[31] Sutton,[64] Eve,[16] Kobsko[28] and Tourneur[67]

Pozzi[49] recommends suture of the ureter in cases of accidental longitudinal injury

The importance of these easily practicable methods can especially be realized when we consider the frequency with which calculi occur in the ureter These bodies give rise to numerous grave symptoms of diagnostic significance which can not be discussed here When their presence is recognized, they are removable by longitudinal ureterotomy as has been practiced successfully in many cases Numerous writers have reported cases and written papers on the subject Of these Charles Paul Galland,[19] Gargam,[20] Pousson,[47] Byford,[9] Hall,[23] Lane,[30] Cullingworth,[14] Terry,[65] Berg,[6] Richmond,[55] Godlee,[7] Pick,[44] Ralfe and Godlee,[54] and Twynam [illegible] are to be named

It must be remarked, in passing, that ureterotomy has been practiced by H A Kelly for stenosis of the ureter, the ureter being reached through a vaginal incision This mode of reaching the ureter is of great value in treating such cases [illegible] case of [illegible]e,[13] in which the ducts were obstructed in the [illegible] by inflammatory matter

Transverse Wounds of the Ureter—It requires no argument to prove that every incomplete transverse wound of the ureter, when closed by a cicatrix resulting from granulations or from prim[illegible]y union after direct suture, must have a tendency to result in a diminution of the circumference of the tube and consequently also of the lumen This tendency may be resisted by retraction of the lips of the wound, which always occurs on account of muscular action, permitting proliferation of epithelial cells and allowing them to wander out over the granulations to temporarily and perhaps permanently prevent injurious stenosis I believe, however, that until we have clinical observations to prove the limits which we can depend upon, we should treat every transverse wound of the ureter involving one third or more of its circumference as immediately threatening stenosis The treatment I propose is a modification of the procedure suggested and successfully practiced by Fenger in cases where stenosis had already occurred The technique is the following Make two longitudinal incisions, with small scissors, in the ureter beginning at the middle of the wound to be closed These incisions should be equal in combined length [illegible] twice the transverse diameter of the tube [illegible]d off the sharp angles of tissue with the scissors and suture longitudinally with the object of producing a very w[illegible]ad of a very *contracted lumen* Scar contraction can not now reduce the caliber of the tube sufficiently to [illegible]re with the passage of urine If this ope- union has [illegible]rformed within the peritoneal cavity the Bocchini [illegible]rotected after the manner described for [illegible]ted [illegible]ds, by drawing about it a fold of peritoneal embrane

Complete Transverse Wounds—Many attempts have been made to unite the ureter, when transversely severed, by the ordinary methods of suture Tuffier[70] of France, has published an elaborate account of his experiments upon dogs to determine the feasibility of the project He claimed to have succeeded in getting union, but the amount and disposition of the cicatrix were such that when contraction *of the scar* occurred the tube was rendered useless as a duct

Experimenters have hitherto been so much discouraged with the results of their trials that their recommendation has been to resort to such make shifts as implantation into the rectum, the vagina or the skin

In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for March 4, 1893, the writer published a method of uniting *the ureter* after transverse division which answers all the requirements of the conditions It consists, briefly in the implantation of the upper cut end of the tube into an opening in the side of the lower end The technique is as follows

1 Ligate the lower portion of the tube one-eighth or one-fourth of an inch from the free end Silk or catgut may be used Make with fine sharp pointed scissors, a longitudinal incision twice as long as the diameter of the ureter, in the wall of the lower end, one fourth of an inch below the ligature

2 Make an incision, with the scissors, in the upper *portion* of the ureter, beginning at the open end of the duct and carrying it up one-fourth of an inch This incision insures the patency of the tube

3 Pass two very small cambric sewing needles armed with one thread of sterilized catgut through the wall of the *upper* end of the ureter, one eighth of an inch from the *extremity*, from within outward, the needles being from one sixteenth to one eighth of an inch apart, and equidistant from the end of the duct It will be seen that the loop of catgut between the needles firmly grasps the upper end of the ureter

4 These needles are now carried through the slit in the side of the lower end of the ureter into and down the tube for one half an *inch where they* are pushed through the wall of the duct, side by side

5 It will now be seen that the traction upon this catgut loop passing through the wall of the ureter will draw the upper fragment of the duct into the lower portion This being done the ends of the loop are tied together securely and, as the catgut will be absorbed in a few days, calculi do not form to obstruct the passage of the urine

6 The ureter is now enveloped carefully with peritoneum as already described in other operations, provided an intraperitoneal operation has been done

This method has many advantages, some of which are as follows

1 The urine is made to pass through its normal channel

2 Healing takes place at once without even temporary loss of function or a temporary fistula

3 *No stenosis occurs* even after a long interval of time

4 The ureter can always be united if accidentally injured, at any operation, with materials always at hand

5 Leakage can not occur, because the upper extremity of the ureter acts as an obstructor to the lower portion of the tube

6 Scar contraction can never injuriously diminish the lumen of the tube, because the scar which encircles the ureter after union by this method is equal *in length* to twice the extent of the incision in the side of the lower urethral stump

Some months after the writer had thought out the above method theoretically, and several weeks after the publication of the preliminary communication, references were found to a *method experimentally tried by Poggi*[illegible] *of Italy*

This method consists, briefly, *in the end-in-end invagination* of the upper into the lower portion of the ureter I believe my lateral method is better for two reasons

1 Because the invaginated end of the ureter is less likely to be compressed by muscular action of the invaginating portion in the lateral method, since the constricting force can not act so directly at the *immediate* point of union

2 In the lateral method the line of permanent and firm union is not a circle, as in Pozzi's method, but an ellipse, so that senescence of the new connective tissue can not result *in* injurious contracture

It is not necessary to detail the many experiments made to demonstrate the practicability of this procedure The following will suffice

Experiment—Jan 17, 1893 Bitch medium sized, in good condition Assisted by Dr A E Halstead, I opened the *abdomen in the median line* through an extent of two and one half inches beginning at a point one inch above the *pubes* *Gentle traction* upon the bladder caused the ureters to stand out prominently beneath the *posterior layer of peritoneum* Opening the posterior peritoneal wall with a snip of the scissors, the right ureter was drawn *gently out* and cut in two with the scissors at a point about an inch above the entrance into the bladder The open end *of the lower fragment* was next closed *with a ligature* and a slit about seven millimeters long made in the side *of the tube* just below the ligature Two needles armed with a single thread of catgut, were then passed *through the wall of the* upper portion of the duct from within outward, opposite the slit in its wall which had been made to *enlarge* the opening These needles were then passed through the slit in the side of the lower portion of *the ureter* and their points carried down the tube about one cm , where they were pushed through the wall of the ureter *and* brought out side by side By gentle manipulation the upper extremity was drawn into the lower *tube and* the suture being tightened and tied, the slit was seen to be entirely occluded Dogs have a very *abundant omentum and* to simplify the technique the omentum was gently drawn about the *ureter and tacked* down with two fine silk sutures The abdomen was closed Three weeks later the dog which had not been *ill* after recovering from the anesthetic, was killed The *abdominal* wound was completely healed Upon opening the abdominal cavity much fat was found in the usual places showing good nutrition *The kidneys* were perfectly normal and exactly equal in size and *similar in* appearance There was no excess of urine in either pelvis There was absolutely no evidence of inflammation at any point *The union of the* ureter was found to be perfect as can be seen by examining the specimen which I present *and* the accompanying cuts from photographs The omentum surrounds the point of union (See Figs 1 *and* 2)

It is evident upon reflection, that this method of reuniting the ureter after transverse division can be utilized for restoring the continuity of the *duct not only* after accidental division, but after division deliberately undertaken for the purpose of removing retro-ureteral morbid tissue in abdominal operations, and after removing a portion of the ureter by resection in continuity for strictures, and for ulcerations about calculi involving annular destruction of the mucous membrane which would eventually terminate in stenosis, if untreated

That the ureter can sustain a resection involving a considerable amount of tissue is evident, since ureters measuring ten inches while in situ will easily measure twelve to fourteen inches when *removed* The operator should remember that the longitudinal *muscular* fibers tend constantly to shorten the distance between the ends of the duct, so that when the ureter is cut transversely the ends retract *considerably* Traction upon these ends is admissible to a very considerable extent, which can not be accurately determined until a larger amount of clinical experience in this direction has accumulated Meanwhile we may easily determine in individual cases the amount of material which we may remove from the longitudinal extent of the ureter, in deliberate resections The force exercised should be moderate in amount but steadily applied for a considerable time, the surgeon remembering that he is overcoming muscular resistance As the blood vessels ramify tortuously over the ureter, they are in no danger of it being injuriously stretched or lacerated From these statements it must be seen that for the excision of a constricting band the ureter need not by any means be longer than normal

That my operation is equally as applicable to human ureters as to those of lower animals has been proved by Dr Howard Kelly of Johns Hopkins University, Baltimore Dr Kelly has informed me verbally that having seen my preliminary description of the method in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, he had an opportunity of applying it in a few days upon a patient suffering from a large myoma of the uterus One of the ureters having been injured during the operation, it was held by forceps until the myoma was removed when it was reunited by my method The patient made an uneventful recovery Dr Kelly will shortly publish a detailed account of the case [1]

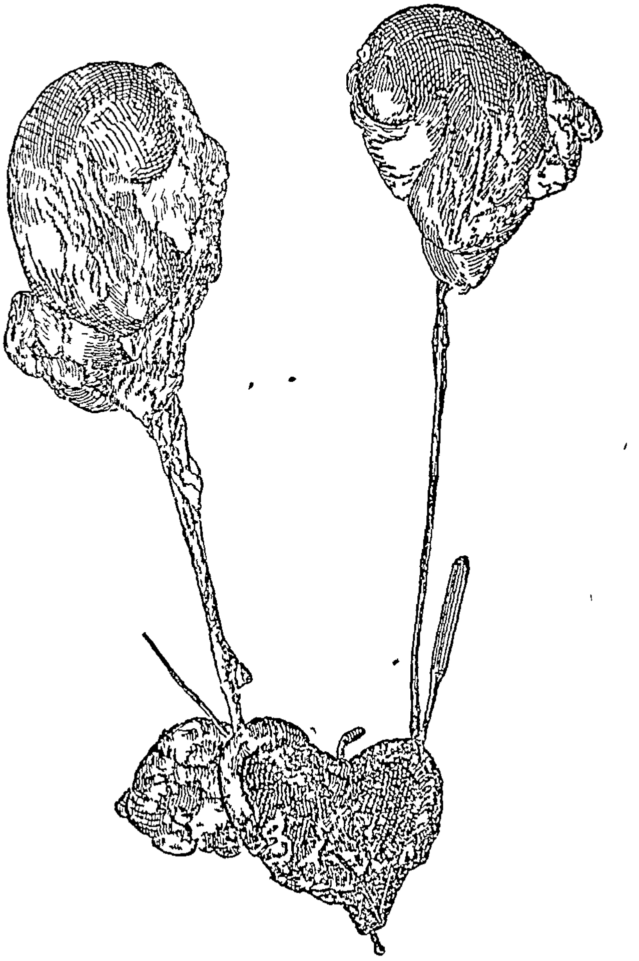

FIGURE 1

Complete transverse division of the ureter at the infundibulum offers conditions essentially different in many respects from those presented in the continuity of the duct There the tube is much wider than at the lower part, a fact of which we can take advantage because of the greater mechanical ease with which we can insert sutures, but more especially because scar contraction, as a result of union after suture, is not so likely to prove destructive to the lumen of the tube

Two pathfinding papers have recently appeared dealing with this subject

The first of these, by Kuester,[29] described an operation upon a boy who had been operated upon previously for a hydronephrosis involving a solitary kidney An abdominal renal fistula was left, through which all the urine was discharged Kuester exposed the kidney and ureter by posterior incision, opened the ureter below the sacculated gland and found two cm below the kidney, a stricture This condition he treated successfully by resecting the strictured portion of the tube and implanting it into the hydronephrotic sac A lumbar fistula remained for several months but was finally cured by a secondary operation

This instructive operation was borne in mind in the following case, which I briefly report in order to testify to the applicability of the method

Boy aged 19 suffered from an attack of typical typhoid fever Following this attack some weeks later he developed a pyonephrosis Dr A E Halstead, in whose practice the case occurred, invited me to see the case with him We established a fistula upon the abdominal wall, the sac discharging a large amount of urine As the fistula remained "permanent" I operated, upon the invitation of Dr Halstead, for the purpose of restoring the normal channel for the discharge of the urine The incision was practically that used by Kuester and others, beginning at a point two inches to the left of the posterior median line, carried down for an inch and a half almost straight and then curved forward toward the anterior superior iliac spine As soon as the anterior lumbar fascia was opened the ureter was discovered without difficulty It was smaller than normal and seemed to be atrophied The kidney dilated on account of partial closure of the abdominal fistula, could easily be felt in its normal position Upon opening the renal sac and allowing part of the fluid to escape the finger could be easily passed into the pelvis of the kidney, but no stone was felt I then made a ureterotomy and passed a probe up the ureter to meet the finger, but between the finger and the probe I could distinctly feel a valvular fold of mucous membrane Concluding that this was the obstruction which had prevented the normal discharge of urine I proceeded to resect after Kuester's method and succeeded in implanting the ureter into the sac much as he had done It was now thought best to expose the ureter in the direction of the bladder Upon passing a probe downward a short distance the ureter was found completely closed, and on careful investigation its lumen was found to be entirely obliterated for several inches There was nothing left to do but to extirpate the kidney The patient recovered

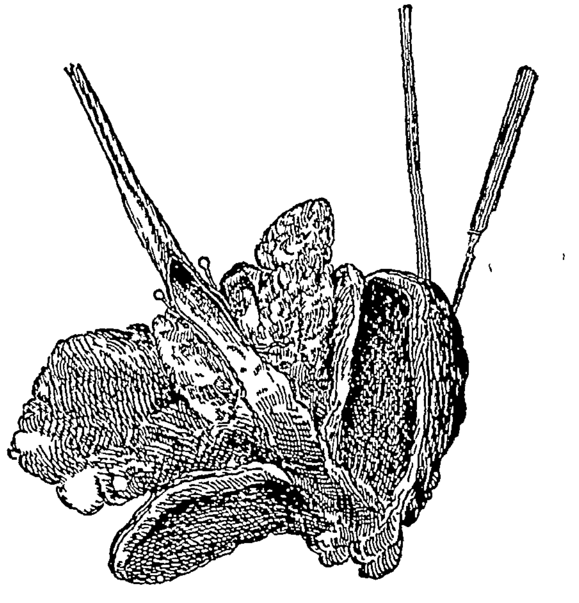

FIGURE 2

This case, together with Kuester's, fully demonstrated the feasibility of this operation in this condition, and from it I concluded that kidneys should not be extirpated for simple obstruction at the infundibulum

The second of these papers, that of Dr Christian Fenger of Chicago, was read before the Chicago Medical Society Feb 6, 1893, and was published in the *Chicago Medical Recorder* of March, 1893 Dr Fenger's first work on stenosis of the ureter was performed May 31, 1892

In a case of intermittent pyonephrosis the kidney was opened upon its convex surface and digital exploration made without the discovery of a stone Catheterization of the ureter was impossible The pelvis was now opened from its posterior surface This revealed a valvular opening from the pelvis into the ureter The valve was then divided transversely and the edges of the wound were united by a suture A bougie was inserted through the wound in the kidney, brought down into the ureter and retained there for two days The wound in the pelvis was united by sutures The floating kidney was secured by nephrorrhaphy, the wound in the kidney drained and the usual dressings applied The patient recovered without a fistula and had no return of the pyonephrosis

This remarkable case, so ingeniously treated, is the first of its kind The method is indeed worthy of commendation and study It will be found applicable in many kidneys which heretofore would have been ruthlessly extirpated

The second of Fenger's cases is briefly as follows

Traumatic stricture of the ureter close to its entrance into the pelvis of the kidney intermittent hydronephrosis The patient 47 years of age had sustained an injury thirty four years previously After ten years the hydronephrosis developed Operation—lumbar nephrotomy—disclosed no calculi The ureteral entrance could not be found through the renal opening The dilated pelvis was opened, but still the opening of the ureter could not be found The ureter was now isolated and its upper end found to be imbedded in cicatricial tissue for half an inch Lower down, though small in caliber the duct was normal A longitudinal incision one cm long was now made in the ureter just below the cicatrix The stricture was one cm long It was incised upward into the pelvis The ureteral wound was now stitched longitudinally, after the manner of the Heinecke Mikulicz procedure for the treatment of pyloric strictures No bougie was left in place The patient made a good recovery without return of the hydronephrosis

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[1] This case has just been published in The Johns Hopkins Bulletin, October, 1893

In the first case, Fenger has given us a method of successfully dealing with valvular obstructions at the infundibulum In this second procedure he has added to our resources for doing away with stenoses of the ureter at the infundibulum For this condition Fenger rightly claims for this operation the following advantages over the resection of Kuester

1 It is an operation more economical of tissue and preferable when the elongation of the ureter is not sufficient to permit the two cut ends of the ureter, after excision of the stricture, to come in contact without stretching

2 It is easier to secure union of a ureter which has been incompletely divided in a transverse direction

Implantation into the Bladder—When injury to the ureter at or very near the vesical end, occurs as a result of an accidental or surgical wound it is feasible to implant the ureter into the bladder immediately, if permitted by circumstances such as asepsis, abundance of time, local anatomic conditions etc

Abundant clinical experience proves this statement In addition Paoli and Busachi[13] report successful implantations of the ureters into the bladder in dogs Their success depended upon the splitting of the distal end of the ureter for a short distance and careful suture of this quadrangular opening into a slit in the bladder

In the human subject the operation field should be left, whenever possible, outside the peritoneal cavity This result can be secured under certain circumstances only by dissecting the peritoneum loose and stitching it down behind the site of operation as directed in the description of the plastic extension of the bladder to meet the ureter The bladder should be kept drained in some convenient manner to annihilate intra-vesical urinary pressure and to limit as much as possible the motion of the parts until union has occurred

Bocchini[8] has very recently reported an interesting case operated upon by Novaro, in which a vaginal ureteral fistula following hysterectomy was cured by abdominal incision and careful suture of the excised ureteral meatus into the bladder

Complete transverse injury with loss of substance is evidently one of the gravest ureteral conditions with which the surgeon can be confronted The methods by which this condition can be met may be arranged under three heads

1 Methods by which the urine is still made to flow into the bladder

2 Methods by which the urine is discharged extra-vesically, either into some cavity or directly into the outer air

3 Methods by which the flow of urine is permanently arrested either by destruction of the secretory power of the kidney or by its extirpation

By injuries to the ureter with loss of substance, I would be understood as meaning wounds with a loss of substance too great to admit of utilizing my method of reuniting the tube when transversely divided

Under the head of methods by which the urine is still made to enter the bladder, we must first consider the methods by which the ureter is substituted by a connective-tissue tube as in the case of Nussbaum[33] In a case of fistula opening upon the abdominal wall after a laparotomy Nussbaum passed a properly shaped glass tube into the bladder from the abdominal wound through the connective tissue about the bladder After the tube had remained in position for some time it was withdrawn and the haphazard procedure was followed by success, although I can not find a record of an examination of the case after the lapse of any considerable time There are many objections to such an attempt

1 Infection of the connective tissue about the tube is liable to prove serious, or even fatal

2 The operator depends upon the formation of a new connective tissue duct to carry the urine permanently into the bladder This connective tissue is certain to contract as time passes and occlude the lumen of the tube

3 The new tube can only be lined with epithelial cells when it is very short, since the epithelium of the mucous membrane can not proliferate beyond certain definite small limits

4 Even if the tube becomes lined with mucous membrane the new epithelium will be poorly resistant, and will be likely to remain a nidus of disease

5 The method is rarely applicable and is unlikely to be a primary success, on account of the difficulty of making the new tube (especially at the abdominal end) withstand the intra-vesical pressure

This last point is well illustrated in the following experiment

Nov 24, 1892 Jersey calf male, aged six days, weight cir ninety pounds, in good condition Chloroform anesthesia The abdomen was opened and the right ureter cut in two about three inches above its cystic insertion The cystic end was ligated The upper end was carefully sutured into the end of a thoroughly decalcified turkey's wing bone The urine at once began flowing from the lower end of the bone tube, showing a tight union The lower end of the bone tube was then sutured as carefully as possible into the bladder The peritoneum was somewhat imperfectly brought over the tube and the abdomen closed The calf after recovering from the anesthesia seemed comfortable, drank abundantly of milk, slept and urinated normally for fourteen days when it appeared ill for two days and one morning was found dead Postmortem Adhesive general peritonitis was found to have been the cause of death The kidneys were normal The right ureter entered an enormous retro peritoneal sac containing urine and fibrin from inflammation of its walls The ureter was still fastened into the unchanged bone tube, around which was a perfect tube of new connective tissue The bone tube was loosely inserted into the bladder and was freely patent At the point where the ureter entered the bone tube there was an opening communicating with the large sac containing urine The intra cystic tonic pressure had caused the enlargement of the cyst until it contained a gallon of fluid

This instructive though unsuccessful experiment was interesting especially on account of these points 1, there was a patent canal from the pelvis of the kidney to the bladder, 2, there was no apparent attempt at absorption of the bone tube, 3, the intra-cystic pressure must be, at least temporarily, removed in attempts to replace the ureter by a connective tissue tube The last very practical observation is especially applicable in case the ureter is implanted directly into the bladder, so that the valve action of the cystic opening of the duct is abolished

Dr Christian Fenger in personal conversation in February, 1893, suggested to the writer the use of an isolated knuckle of bowel to supply material for the replacement of ureteral losses Dr Joseph B Bacon of Chicago, soon after published this same suggestion, which was original with him, in the *Chicago Medical Record* Dr Bacon proposes to isolate a sufficient length of small intestine, by cutting through the bowel at such points as will leave the isolated loop of intestine well supplied with blood vessels He would then restore the continuity of the bowel by the use of Murphy's anastomosis button, and implant the ends of the injured ureter into the isolated portion of bowel after closing the ends of the bowel The urine will then find a continuous channel from the pelvis of the kidney to the bladder

This very ingenious method, apparently so plausible and captivating, is nevertheless open to the following theoretical objections which could scarcely be controverted by successfully practicing the plan in actual operations upon the human subject

1 In most operations in which the ureters are injured the resources of the patient are taxed to such an extent that it is better surgical practice to resort to a very rapid procedure, as implantation upon the abdominal wall This objection may be neglected when the operator is especially skillful in intestinal surgery

2 The operation exposes the patient to all the risks of resection of the intestine, in addition to those naturally referable to the original operation

3 The portion of intestine with which it is proposed to replace the lost ureteral substance is necessarily septic and, as we shall see later on, this septic condition, by threatening the patient with uretero-pyelo nephritis, absolutely contra-indicates this operation

One great practical drawback to Dr Bacon's suggestion lies in the fact that he proposes to do all this complicated work within the peritoneum If the intestine is ever to be used to piece out the ureter, I would suggest an extra-peritoneal method of doing the operation so far as the ureteral work is concerned This suggestion is based upon the experiments of Poggi and Tizzoni an account of which was published in 1888 These investigators succeeded in replacing the excised bladder with a portion of intestine isolated for the purpose And recently Dr S Rosenberg of Hamburg, has succeeded, experimentally, in increasing the size of the bladder by suturing to it a detached piece of intestine I would suggest, as a method less dangerous than that of Dr Bacon, bringing out the isolated loop of bowel upon the abdominal wall, suturing the peritoneum behind it sufficiently loosely to prevent strangulation of the vessels supplying it, and making a ureteral fistula above the loop of isolated bowel The bowel may now be embedded beneath the skin with adequate drainage The secondary operation some time afterward will aim to direct the flow of urine into the now shrunken and far less septic intestine and thence into the bladder The bladder must be temporarily drained

This method by the use of intestinal loops can never be of practical consequence, except possibly in those very rare cases in which the ureteral fistula opens upon the abdomen at a point remote from the bladder, requiring on that account a large amount of tissue to fill in the space

Where the ureteral injury occurs low down, near the bladder, the loss of substance must be considerable, indeed, if the ureter can not be implanted directly into the bladder This can be accomplished, if the ureter can be drawn down and the bladder drawn up sufficiently, with great ease, as has been described under the head of complete transverse injuries without loss of substance

(*To be continued*)

THE ETIOLOGY, MORBID ANATOMY, DIAGNOSIS AND TREATMENT OF INFANTILE HERNIA, OF THE INGUINAL TYPE IN THE MALE

Read in the Section on Diseases of Children at the Forty fourth Annual Meeting of the American Medical Association

BY THOS H MANLEY, A M, M D

NEW YORK N Y

A fully developed hernia is rarely met with at birth, though the conditions favorable to the evolution of it always exist at this time in the male

When infantile-hernia is met with, it may appear in divers situations, in the simple or complicated forms, single or double, with or without pain

Inguinal hernia in the male child is commonly associated with ectopia of the testis

Dr Wm T Bull has said that when a male child is sent to him with hernia, one of the first things he does is to look for the testicle

When hernia appears under the first year, a common impression prevails that it comes from excessive crying, and when, later one takes his feet, the evolution of the infirmity is charged to injury

As soon as a hernia is discovered the parent, filled with alarm and knowing that a mass is outside the abdominal-cavity, which belongs within, at once hurries off for a truss and applies it

The vast majority of such herniæ are recovered from for the time, but in later years generally return There is a considerable number of cases in which the hernia is never fully developed The patient may go through life, never conscious of the infirmity He has a greater fullness in one groin than another perhaps, but as it never occasions any annoyance, he gives it no thought This is the type in which, when strangulation occurs, the patient will deny with emphasis, that he ever had a hernia, though, on close questioning, will often admit of always having had a fullness high up in the groin

It has been said that with our advances in civilization and the widespread growth of democracy, that hernia has become much more common than when the social lines were more clearly drawn, when it was a condition peculiarly common among the aristocratic classes There can be no question, but it is an infirmity of much greater prevalence among the easier classes than among those who toil with their hands for a living For it has been long noticed that it is commonly seen in the families of those in America in whom the transition from poverty to affluence has been sudden, and in which neither parent or ancestry was afflicted There can be no doubt either, but all cases of so called "rupture" are of infantile origin, or rather are attributable to defects of development which antedate birth

Of late years, radical operations have been recommended for this infirmity early in life Hernial operations have been revived on an enormous scale, for every type of hernia in the infant and adult But it does not appear from the ancient literature of hernia, that the *infantile* type was ever treated by direct surgical intervention in past ages

It would be a great gain, if we could cure all the cases of this malady as soon as we discovered them after birth But this has proved a disappointment, for but few and uncommon phases of it can be radically treated and permanently cured by surgical methods

With a view of determining what the chief factors are in the causation of infantile hernia, its morbid anatomy, pathology and treatment, rather than for the purpose of attempting to present anything original, this short essay is offered It may be added that inasmuch as the technique of surgical operations for it was considered by me in a brochure, presented at the Nashville meeting three years ago, this will not be considered in detail at the present time

ETIOLOGY OF INFANTILE HERNIA

The chief predominating elements in infantile-hernia are anatomical, though it is well to remember that this, in common with all other physical imperfections is commonly hereditary The maldescent of the testis is responsible for more herniæ than all other known causes combined As this organ leaves its abode from just below the kidney, at about the sixth month of intra-uterine life, it may become arrested in any part of its journey by adhesions and not engage in the abdominal walls at all This may occur on one side or both The testis may be wholly absent at birth, and make its descent safely later As it advances and presses before it the process-vaginalis, it may besides, carry with it a coil of intestine, a fringe of the omentum, or the wall of the bladder Many times in dissections and operations on the herniæ of infants, I have found the sac of a recent hernia very thick, dense and adherent to the spermatic cord through its whole length, which pathologic condition clearly indicated that the parts were favorable to the advent of a hernial protrusion, which had no doubt existed not only since birth, but before it, and that it only required the application of a certain force to make the hernia complete

The funicular-process at birth is very often patent, or imperfectly closed Later, it becomes completely obliterated when nothing interposes with physiologic processes But it may remain widely open, and hence permit the intestine to descend into the tunica-vaginalis and lie in immediate contact with the testicle or firmly adherent to it What is the most common, it remains enclosed in different segments of the cord, from the internal ring out to the gubernaculum testis Among the lesser elements in causation and aggravation are hygienic conditions, as was some years ago, pointed out by Dr Frank Parsons of Massachusetts, in the wearing of the tight abdominal binder, besides excessive feeding, and forcing the child to walk too early

Some authors have cited an excess of the intestine or omentum and an elongation of the mesentery, as important factors It seems to me that a preternatural diminution of abdominal capacity might constitute an important causation

From the foregoing, it is evident that as causation differs in this disease, so must treatment be varied, and that while some causes will remedy themselves, others may be obviated, while with a considerable number, the infirmity depends on such conditions as are beyond art to remove they must remain incurable, though not being beyond effective measures of relief

MORBID ANATOMY

The underlying ground-work of all infantile herniæ is defective development In but a comparative few, will we find distinct evidence of recent pathologic changes How or why remains a mystery, but it is evident that through some occult cause the testis in its march often acquires adhesions to adjacent parts, and thus, while pushing a duplicature of the peritoneum before it, may carry one, or possibly two, fringes of the peritoneum along with it, if not into the scrotum into the inguinal canal These adventitious sacs or omental masses, in time, if no unusual strain is put on the abdomen, are not occupied by viscera, but contract, become obliterated and practically disappear

The same may be said of the enclosed funicular process, which state is practically physiological at birth the infant lying on its back the greater part of its time asleep at this time of life, with loose, semi-liquid fecal discharges, seldom puts any severe strain on the abdominal walls, and no visible hernia follows But, let there be atresia of the rectum or urethra, a tightly adherent prepuce, indigestion from improper food or too much of it, with flatulency, then the confined viscera, in obedience to a well-known physical law, will make their way in the direction of the least resistance, and we will have a matured hernia Whooping cough or a measly cough in the young infant will have the same effect

Simple hernial extrusions in the young child will tend to recede and disappear of themselves, if the recumbent position is continued long enough, in a considerable number The sac contracts, the rings narrow and the canal attains an obliquity Along with this, there is a shortening of the mesenteric ligament, with an alteration in the seat of intestinal contact with the abdominal wall

This process of hernial retrogression is not peculiar to small, diminutive protrusions, but applies also as well to those of considerable volume

In the greater number of cases of ectopia of the testis, hernia is present In certain cases, it appears that the testis passes down through, making a portal of escape for itself, and then recedes, or is suddenly drawn up inside the abdominal rings by a powerful contraction of the cremaster muscle For we will sometimes witness a hernial formation in the scrotum, when the testis is not in sight on that side And in the event of strangulation, as I once said, the testis is in the canal, between the rings, while the extrusion is in the scrotum We will, too, sometimes find a case in which on one day we will discover the testis in the perineum, another time in the scrotum, again between the rings, and finally, we look for it when it has vanished, to reappear again in the scrotum perhaps the next day In many cases in which there is a hernia at birth, but the testis has not yet descended, we will observe before the infant has taken its feet, that it has lodged and the extrusion has disappeared or is greatly reduced in volume

It is only when the testis carries with it into the scrotum either the intestine or omentum, and the congenital type continues, that we will have such a state as will fail of spontaneous relief, or not respond to a tentative therapy The rings being constantly widened by a substance or structure which acts like a wedge on them, become wider and wider, so that the obliquity of the canal is lost If omentum is extruded it will hypertrophy in time and acquire an immense volume It follows, accordingly, that when the testis contracts adhesions with the escaped viscera, the reduction of the hernia will be quite impossible

But there is a considerable number in which, after the rupture descends, adhesions form, when the type is not essentially what is anatomically known as congenital and which, too, in consequence are quite irreducible

In babies, we will at times meet with those in which but one element of the abdominal contents is present, viz, a serous fluid This is commonly called a hydrocele or hematocele, but is in reality, in its elements, clinically and pathologically unlike what is so designated in the adult Not infrequently it is a genuine cystic formation, of a homogeneous composition, while again it is a pure serous fluid or what is known, physiologically, as lymph

DIAGNOSIS

Diagnosis of the inguinal type of infantile hernia is not difficult in the most of cases But nevertheless, in many forms of cystic diseases of the cord, it is impossible to diagnose with accuracy the contents of a fullness which occupies the scrotum or the upper inguinal region Manipulation will not do it, nor is transmitted light a reliable test in all Hypodermic puncture is an important aid, but unless special care is exercised it may do harm, and hence in only exceptional cases is its employment to be recommended But in mixed complicated cases in which there are both cystic disease and hernial protrusion, its use may lead us into the error of assuming that a mere tapping will effect a cure of the case, while as a matter of fact, it will fail in this, besides perhaps lead to puncturing the bowel or peritonitis

Unless a hernia seems to be a source of pain and is increasing in volume, there is no pressing necessity for determining what the mass is, besides, nothing is lost by waiting

In reducible hernia it is not difficult to recognize an epiplocele from an enterocele, but in mixed cases, those which predominate in infants, this will be quite impossible

TREATMENT

The treatment of infantile hernia of the inguinal type, in the absence of complications, should be on tentative lines It is only in exceptional and unusual cases that the question of operation will arise

It will be borne in mind that those cases here described only embrace that class which are seen in the suckling infant before walking begins

The treatment will have reference to a few things mainly

1, diet, 2, clothing, 3, rest, 4, support or pressure, 5, removal of such causes as occasion straining, 6, radical operation

Diet—When the infant is a suckling, nothing need be done in the way of dieting it, only, if the mother is constipated, she should be given sufficient of an aperient to act moderately on the bowels of the infant, through the mother's milk But in modern times, when so many mothers are over-fed and under exercised, or are the partners of ardent husbands, they either have no milk, it dries up, or is unfit for the infant, when resort must be had to artificial diet The infant commonly over-eats, overloads the intestine, or in consequence, accumulates an undue amount of fat in the omentum If digestion is disordered, he has gaseous distension from alimentary fermentation, when the abdominal walls are put on a severe strain

Caution should be exercised, then, when the natural aliment is cut off from the herniated infant, not to over-feed, nor give food of improper quality Harm is apt to rather follow too much than underfeeding

Clothing—Little need be said as to the quality of clothing The infant must be comfortably clad The only question is with regard to how the garments are adjusted The tight encircling band which has been so long applied over the lower thorax and entire abdomen, when adjusted, under the old orthodox rules is quite certain to render the spontaneous cure of a hernia impossible Hence, in every case, this should be cast aside The abdominal muscles should be allowed the freest possible play, and the peristaltic movements of the intestine be in no manner hampered by an artificial pressure of any description whatever

To overcome this deleterious action of the binder, Dr Frank S Parsons has advised that the garments covering the trunk and extremities should be adjusted to, and suspended from the shoulders (The Hygiene of Infant's Clothing, JOURNAL OF AMERICAN MEDICAL ASSOCIATION August, 1890 By Frank S Parsons) Those of us who have given this subject a special study must indorse Parson's views, and commend his special hygienically-made infant wearing apparel

Rest — Physiologic-rest, of all known agencies is one of the most potent, as an aid in the therapy of every species of hernia, and at every stage of life This element of rest is what so powerfully contributes towards the recovery of infantile hernia The baby lies in a quiet state in the horizontal position a large share of his time, and when he comes to sit up, yet the parts in the region of the infirmity by this attitude, are in a favorable state for restoration to the normal condition The depression of the inguino-femoral fold, the pressure downward of the abdominal parietes and upwards of the convexity of the thighs exert a forcible influence in relaxing the fibers in proximity to the ring, and the recession of the visceral displacement Therefore, in the herniated infant particularly when the mass is of considerable volume, the lying and sitting positions should be encouraged, as long as possible Creeping or walking "on all fours," on the hands and knees, thus carrying the spine in a horizontal direction, and equally distributing the weight over the anterior abdominal walls, no doubt, is a necessary and salutary exercise, when the infant has reached the first year or before it But the practice of forcing an infant into *early* walking, carrying the spine erect and putting a severe strain on a weakened part is a vicious one considered in any light, to the herniated, as it not only interferes with the reparative efforts of nature, but it likewise greatly aggravates the preexisting condition, rendering subsequent treatment more difficult and unsatisfactory

Support or Pressure—My own experience has been that a small painless hernia which shows no tendency to enlarge, will do better by entire non-interference, than by too much, or the misdirected application of pressure Parents are naturally apprehensive when a hernia is discovered, that it will become worse with time, and expect something more than an encouraging promise, besides perhaps, with many of these simple cases, a simple bandage support will probably do no harm But before we apply anything, let us be assured that the testis is well down and that the supposed hernia is not a simple cyst With these cases the hank-truss so-called, made of a couple of skeins of worsted, or the simple pad and spica bandage, amply suffice The general use of the spring truss in infantile hernia is a bad practice Its adoption is to be prohibited, except in those cases, in which the medical attendant is permitted to keep the case under constant observation Those trusses with a strong spring, do incalculable harm By their pressure they often not only prevent the testis from fully descending, but they likewise induce adhesions of it with other parts Simple reducible hernia they render irreducible, in many cases, and in many too, by their constant pressure, they induce atrophy over the rings which they are supposed to strengthen When the child takes his feet is the time when the truss plays an important rôle, until then its employment must be guarded by an intelligent supervision

The removal of such causes as occasion severe straining—It goes without saying, that in every case, before any thought of treatment is entertained, we should first institute a searching inquiry as to the etiologic factors If the hernia be an inheritance, when once reduced, it should be remembered that, as a tendency to relapse remains throughout life, it may be a wise precaution, as a prophylactic measure, to recommend the wearing of some sort of support over the inguinal rings

In all cases, we should be assured that there is no impediment in any part of the urethral or rectal passage

Operation for radical cure—As the operation for radical cure of hernia is rendered devoid of pain and is attended with little or no danger to life, the temptation to perform it is very great, when we can practically promise success in every case But when we bear in mind that the greater part of infantile cases will spontaneously disappear, and as we know, now, that very few operations for radical-cure produce permanent effects, we should hesitate to ever recommend surgical intervention in any, except certain complicated cases, presenting unusual characters

The cases of infantile inguinal hernia which require operation are, 1, those in which there is a marked tendency to increase in volume, 2, those which are attended with severe pain and 3, those in which there are extensive adhesions between the testis and viscera, and there are no possible prospects of reduction or cure without radical methods With these exceptions none should be treated by any other than ordinary, safe and tentative means

The technique of operation is practically the same for the young as the adult. Although it is quite impossible to preserve the dressings from the urine, on being displaced, the wound heals well.

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As the scope of this paper will not permit it, I have purposely refrained from including the various complex types of inguinal hernia, besides those which present in the umbilical, femoral and other regions, which overlie or are continuous with the abdominal cavity.

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Read in the Section on Diseases of Children, at the Forty-fourth Annual Meeting of the American Medical Association.

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Of the various theories that have been advanced from time to time, in the effort to elucidate the etiology of chorea and to localize the affection, that is, to ascribe to the choreic movements either a cerebral, or a spinal, or a conjoined origin, that of a diminution or loss of spinal inhibition recently proposed by Prof. H. C. Wood in a contribution read before the Philadelphia Neurological Society and published in the *Journal of Nervous and Mental Diseases* for the month of April, may be accepted as preeminently a rational one, a theory that is based upon sound scientific investigation and deliberate ratiocination. We would invite a perusal of this very interesting paper, as giving in a more concise and intelligent manner than any resumè we could offer, the various steps that led up to the enunciation of the theory suggested. In the meanwhile, permit us to review briefly some of the principles involved in this line of study of the motor function of the cord, with its physiologic and pathologic manifestations.

It appears to be a fundamental law that certain highly specialized cells of the nervous organism have relegated to them powers that are dominant, whose function it is to dominate and regulate other cell-groups not so highly specialized in the assignment of the complex workings of the body. Especially is this law exemplified in the familiar manifestations of the well known cardio-inhibitory center of the vagal nucleus, and in the intensely interesting and intricate phenomena of thermotaxis. That group of cells to which has been alloted the power of inhibiting the motor function of the spinal cord is designated as Setschenow's center, which, in the frog is placed in the optic lobes, and in man and the higher vertebrates is believed to be situated somewhere in the corpora quadrigemina or medulla oblongata. Whatever may be its precise location, it is undoubtedly true that stimulation of this portion of the brain-substance will be followed by a marked diminution in the reflex activity of the cord, thus demonstrating at once the dominating influence of the center over the motor tracts of the cord beneath.

Spitzka, in the *Reference Handbook of the Medical Sciences*, has aptly said: "The spinal cord is essentially a segmental organ;" in the typical vertebrate it may be regarded as made up of a series of nerve centers, fused into a column, "each center corresponding to a somatic segment, with which it is connected symmetrically by a pair of spinal nerves. Each one of these spinal segments corresponds in its topographical situation with the somatic segment which its nerves supply, and these nerves take a direct transverse course, leaving the cord at right angles to traverse the intervertebral foramina and thus reach their somatic destination."

Stimulation confined to any one of these spinal centers,—thus directly or absolutely augmenting its motor power, or its function of motor discharge, or the cutting off from any one such center of the inhibitory action of the dominant center in the brain above—thus, primarily, indirectly or relatively, and secondarily, absolutely, increasing its motor power, will be accompanied by spasmodic muscular contraction in the somatic segment supplied by the implicated center. This is self-evident. Now, generalizing, suppose that the direct stimulation be applied to the spinal centers as a whole, the entire cord, simultaneously, or that the inhibitory action instead of being removed from a single spinal center be very perceptibly diminished, or absolutely cut off from the entire cord, and it will go without saying that all of the somatic segments supplied by the spinal motor nerves will be involved in the exaggerated discharges of motor force, and that the muscular system of the body will, so to speak, run riot. Prof. Wood, from his studies in this direction would ascribe to chorea some such origin as this. He suggests that the direct cause of chorea lies in a disturbance or overbalancing of the equilibrium that normally exists between the motor power of the spinal cells and the inhibitory apparatus of the spinal cord located in the so-called Setschenow's center of the brain, the latter in choreics being involved in a paresis more or less marked. During inhibition the function of an organ is restrained; during paralysis it is abolished. The amount of disturbance will depend entirely upon the degree of loss of inhibition. Thus may be accounted for the varying grades of choreic manifestations, from the slightest case of so called spinal irritation with the characteristic unrest and ebullition of nerve force and the exaggerated reflexes of the neurotic individual, to the grave cases of chorea major with absolute loss of control of voluntary muscular effort, and finally, diminished or absent reflexes from exhaustion and depression of the entire motor area of the cord.

Nowhere is the perplexing uncertainty that surrounds the true etiology of chorea better demonstrated than in the very recent work of Landon Carter Gray. In it, he gives a varied list of causes of the disease, covering the most remote possibilities and including such unsatisfactory etiologic factors as the seasons, the emotions, malaria, race, eye-strain, as well as the more definite causes, trauma, articular rheumatism, imitation and heredity. After such an array we would naturally expect to hear him say that although certain cerebral changes have been well described in the chronic and fatal cases, as well as of the disease in animals, there has never been any approach to a description of the pathologic alterations that would explain the movements of the

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So much, however, for the physiology and pathology of the subject, now for the direct application of the principles thus hinted at, for as far as is possible, all therapeusis should be based upon the results of physiologic investigation and its ultimate rational conclusions Accepting the premise, and regarding chorea as due in all probability to a diminution or loss of the inhibition power of Setschenow's center, it is evident that our efforts, therapeutically, should be directed toward the employment of such remedies as will tend to increase or restore the diminished or lost inhibitory power Hitherto the drugs that have been exhibited in the treatment of *chorea have been of two classes*, *either those* whose action upon the nervous system has been confined to the motor nerves—direct paralyzants of the motor nerves and their peripheral filaments, or those whose physiologic effect upon the nervous organism has been that of a powerful depression of the spinal centers To the former class belong the bromids, lobelia, and the more recently revived remedy, conium, while in the latter would be grouped arsenic, calabar bean, chloral, cimicifuga and antipyrin Antipyrin alone reaches a little farther in its action, and exerts upon the cerebral cortex a peculiar sedative influence

In quinin, however, we have a remedy whose action upon the nerve centers differs radically from that of the remedies we have as yet mentioned· Since the researches of Chaperon, thirty-five years ago, repeated experiments in the physiological laboratory have abundantly demonstrated the soundness of his claims The direct stimulating action of quinin upon the so called inhibitory center of the cord, even in small doses, is now thoroughly established Undoubtedly, during its exhibition, there is a remarkable diminution in the reflex activity of the spinal centers In cinchonized animals the discharges of motor force are sensibly lessened, and this spinal inhibition increases *pari passu* with the degree and duration of the cinchonism This interesting observation suggested to Prof Wood the possible utility of quinin in the chorea of dogs A choreic animal in the Hospital of the Veterinary Department of the University of Pennsylvania, was subjected to the method of treatment, and with a most interesting and satisfactory result Within one week from the initial dose of quinin, as Prof Wood records, the spasmodic muscular movements had almost entirely disappeared With this indication to its still further applicability in the management of convulsive spinal affections, choreic patients visiting the dispensary for nervous diseases in the University Hospital were placed upon the quinin treatment under the direct supervision of Prof Wood and Dr Potts While the time that has elapsed since the commencement of the treatment has been short, and the number of patients limited, the results obtained thus far have been, to say the least, gratifying In but four instances did the disease fail to respond to the influence of the drug A synopsis of the cases so treated is appended

Case 1—L C, age 14, female Is attending school Family history good Has had all the diseases of childhood, including scarlatina Her first choreic attack was noticed on January 1, the twitchings beginning in the tongue The movements at the time of her first visit, on the 19th of January were general and severe She had difficulty in talking, and at times bit her tongue She was given quinin gr iv, every three hours until cinchonized, and then three times daily January 21 Movements still present, but much better February 24 Reports nearly well

Case 2—M A, age 14, female Attends school Reported at the dispensary on the 9th of December 1892, suffering with her second attack of chorea The movements had begun a few days before, subsequent to a febrile attack No history of rheumatism The movements were general She was placed upon increasing doses of Fowler's solution and iron and this treatment was continued without marked benefit until Feb 11, 1893 She was then given quinin gr iv, *four times a day, with immediate and considerable* improvement She was under this treatment for ten days, at the expiration of which time she reported herself as cured

Case 3—E F, age 8, female Attends school Reported first at dispensary March 14, 1893 The choreic movements had been noticed since the first of January the attack having followed a fright They began in the left arm At the time of her visit the entire left side was affected Her speech was thick, she complained of pain in her left knee, and her mother said that she had enuresis since the chorea began, although perfectly healthy previous to this The family history was good She was placed upon quinin gr iv, q d *March 17 Reported much better*, and did not return The presumption is that she was cured

Case 4—L D, age 10, female Attends school February 24 Visited the dispensary with the second attack of chorea, which had lasted then for about a week The movements were confined to the right side No rheumatism Was given quinin gr iv q d February 27 Mother reports great improvement March 13 No movements noticeable April 5 Return of some movements The quinin was continued and syr ferri iodid, gtt iii and emul ol marrhuæ f℥i t i d added to the treatment April 19 Reported with complete disappearance of choreic movements

Case 5—L K, age 14 years School girl March 1, 1893 Came to the dispensary with slight choreic movements, affecting principally the muscles of the face This is her second attack, the first one occurring when a year old and lasting three years She was ordered quinin gr iv q d March 13 Her mother reports that she is much better Cinchonism present May 1 Came back with return of symptoms which she says commenced soon after stopping the medicine The same treatment as before ordered was advised, at this date May 17, 1893, she has not returned

Case 6—M H, age 9, female Attends school Nov 7, 1892 First visit, the attack being of two weeks' duration The movements began on the left side which is now the worst, though both sides are affected No, history of rheumatism or other acute diseases Has always been nervous Heart's action rapid Was placed on increasing doses of Fowler's solution without improvement December 6 Is taking 10 drops of Fowler's solution with compound syrup of the hypophosphites Some gastric irritation present December 19 Considerable irritation Reduced to 5 drops January 25 Choreic movements somewhat better but has developed neuritis in both legs Was given quinin gr iv t i d February 8 Choreic movements have nearly disappeared Has not completely regained the power in her legs but they are much improved February 21 No evidence of chorea visible

Case 7—D K, age 12 years Male Attends school and works *on* a farm between times Visited the dispensary April 12, 1893, suffering from his first attack of chorea The movements were very severe involving both sides, could only feed himself with difficulty and his speech was so much affected that it was almost impossible to understand him Quinin gr iv q d was ordered April 15 No better Dose increased to gr iv five times daily April 17 No improvement Increased to gr vi q d April 21 About the same Ordered Fowler's solution gtt iii t d April 26 Somewhat better Is taking five drops of Fowler's t d May 11 Is nearly well Fowler's gtt x t d

Case 8—R B, age 11, female Attends school Was treated at the dispensary for her first attack of chorea from April 26, 1892 to Aug 9, 1892, with arsenic and tonics No movements when she stopped treatment Returned March 14, 1893, with slight movements Was given quinin gr iii, five times a day March 17 Reported worse April 7 No improvement, when she was again placed on Fowler's solution, gtt ix t i d April 17 Much better Is taking gtt vii of Fowler's May 2 Not so well Fowler's increased to gtt ix t d She has not returned at this date, May 17, 1893

Case 9—M C, age 14 years School girl April 10, 1893 Returned to the dispensary with her second attack of chorea Her first one occurring about one year ago The present attack has lasted several months Both sides and speech affected Ordered quinin gr iv q d April 13 Seems considerably better The dose of quinin increased to gr iv five times a day April 21 Choréic movements have almost disappeared May 11 Return of some movements involving principally the hands

Case 10—M D, age 7, admitted to the Hospital suffering with markéd chorea of several weeks' duration Gait very unsteady almost staggering Unable to feed herself Was placed upon Fowler's solution for one week with but slight improvement Three grains of quinin were then given in solution five times a day In three days there was a very perceptible diminution in the choreic movements In two weeks she was able to use her hands in eating, in another week the choreic tremor was no longer noticeable With the improvement in this respect, there occurred also a change in her disposition, the child *becoming brighter* and more playful Fifteen grains of quinin were administered daily for three weeks without the slightest sign of cinchonism Appetite remained good throughout

Case 11—M B, age 12 School girl May 16, 1893 Second attack Slight chorea for one week, preceded by rheumatic pains Was given quinin sulph gr iv q d May 22 Chorea worse, gr vi t d *Pil iron* and *strych*, t d May 25 No improvement, Fowler gtt iv t d Not reported since

Case 12—A L, age 14 School girl May 15, 1893 Chorea since March, both sides and speech affected Mother has had convulsions of epileptic character Was given quinin sulph gr vi t d May 22 Better, gr vi t d and pil of iron and strych, t d May 29 Much better, is taking quinin gr xxvii daily

Case 13—M A, age 12 School girl May 13, 1893 Second attack, first one in 1891 Movements in left side of moderate severity, do not cease during sleep Was given quinin gr iii t d May 17 No better, gr vi q d Strych sulph gr one sixtieth t d May 20 About the same Was given Fowler's solution gtt iv t d May 24 No better, gtt v May 29 Slight improvement

Case 14—C S, age 14 Salesgirl May 13, 1893 More or less choreic movements of muscles of face for past four years Lately these have involved entire body Was given quinin sulph gr vi t d May 17 No better, gr vi q d May 19 Much better Syr hypophos Co ʒi t d May 27 No chorea

Case 15—D R colored, age 10 School boy May 24 Has had choreic movements for one year, which of late are much worse, both sides and speech now affected Was given quinin sulph gr iv t d May 29 Better, gr iv t d and pil iron and strych

This record must be left to speak for itself It will be noticed that in a number of the cases almost immediate improvement took place, which continued for a time, after which relapses occurred This occurrence, it seems to us, may be due to the fact that the quinin merely acts as a stimulant and, like all stimulants, loses its effect in time to be followed by depression Therefore, so far as any conclusions can be drawn from such a limited number of cases, it would seem that the best treatment for chorea would be the administration of *large doses of* quinin to lessen the severity of the movements,, adding at the same time measures to build up and strengthen the depressed nervous system This seems to be shown in Case 4 where final cure only took place after the administration of cod liver oil and iron and also in Case 10, where cod liver oil also had to be administered after a time

Another fact worthy of emphasis is the large doses that the majority of the children could take without any evidence of cinchonism Finally, we do not claim that quinin is an absolute cure for chorea, and that from this time no such thing as failure in the treatment of such cases will be recorded It should be borne in mind that after the chorea has been of long standing, and the loss of inhibitory power considerable or absolute, there result organic changes in the motor cells of the cord, with the development of an atrophic condition In such cases it is probable that failure will be the result of any form of medication, however rational What is claimed is, that in the acute form of chorea, the results thus far obtained from the administration of quinin in large doses have been such as to warrant a further investigation as to the merits, immediate and ultimate, of this line of treatment

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STATISTICS OF INTUBATION OF LARYNX, AND EXHIBITION OF IMPROVED INSTRUMENTS

Read in the Section on Diseases of Children, at the Forty fourth Annual Meeting of the American Medical Association

BY F E WAXHAM, M D
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EMERITUS PROFESSOR OF LARYNGOLOGY AND RHINOLOGY, COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO

In again consenting to present a paper on the subject of intubation, it is with the thought that increased experience and the accumulation of a larger number of cases may be a more convincing proof of the utility of the operation

It will be seen that out of the first 100 cases, there were 27 recoveries, of the second 100, 34, the third 100, 40, the fourth 100, 38, and out of the last 66 22

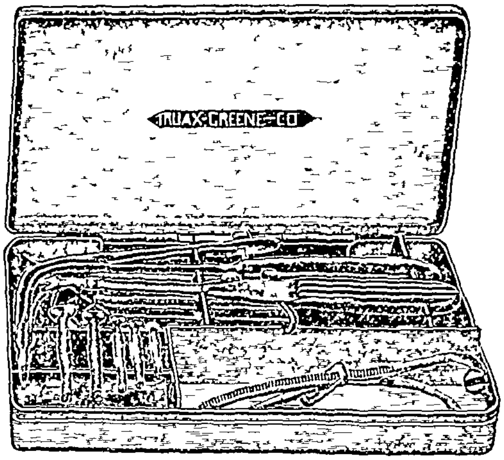

Fig 1

It is often said that intubation is done early, and that this accounts for the large percentage of recoveries, but this is a great mistake The operation is only done as a last resort, and often after the patient has become moribund and unconscious Not infrequently patients have been *in extremis* before I have been summoned, and upon arriving have been found dead More than nine-tenths of these cases have been seen and operated upon through the courtesy of other physicians and there has been no opportunity for operating early, even had there been a desire to have done so Neither have these been selected cases, all have been operated upon, from the young infant to the aged patient, without reference to age, malignancy of disease or unfavorable surroundings Considering the fact that the great majority of these cases have been among the poor and destitute, where it has been impossible to properly care for or nurse them, the results seem highly gratifying

FIRST ONE HUNDRED CASES

Age	No Cases	Recoveries	Percentage
Under one year	5	1	20 00
1 year	13	2	15 38
2 years	22	4	18 18
3 '	17	2	11 76
4	15	7	46 66
5 '	9	3	33 33
6	5	2	40 00
7	8	2	25 00
8	4	3	75 00
9	1	1	100 00
10 "	1	0	00 00
	100	27	27 00

SECOND ONE HUNDPED CASES

Age	No Cases	Recoveries	Percentage
1 year	17	5	29 41
2 years	15	2	13 33
3 '	14	4	28 56
4 "	22	7	31 81
5 "	9	6	66 66
6 '	8	3	37 50
7 "	6	4	66 66
8	1	1	100 00
9 "	3	2	66 66
10 "	1	0	00 00
12 "	2	0	00 00
13 "	1	0	00 00
14 '	1	0	00 00
	100	34	34 00

THIRD ONE HUNDRED CASES

Age	No Cases	Recoveries	Percentage
Under one year	5	2	40 00
1 year	11	2	18 18
2 years	13	5	38 46
3 '	19	11	57 72
4 "	22	9	40 90
5 "	10	5	50 00
6 '	7	1	14 28
7 "	6	3	50 00
8 '	2	0	00 00
9 '	2	0	00 00
10 "	1	1	100 00
20	1	0	00 00
43 "	1	1	100 00
	100	40	40 00

FOURTH ONE HUNDRED CASES

Age	No Cases	Recoveries	Percentage
Under one year	2	1	50 00
1 year	11	3	27 27
2 years	20	7	35 00
3	19	10	52 63
4	20	7	35 00
5 '	11	4	36 36
6 "	5	1	20 00
7 "	5	1	20 00
8 '	3	2	66 66
10 "	2	1	50 00
11 "	1	1	100 00
60 "	1	0	00 00
	100	38	38 00

LAST SIXTY SIX CASES

Age	No Cases	Recoveries	Percentage
Under one year	1	0	00 00
1 year	10	1	10 00
2 years	11	7	63 63
3 "	16	5	31 25
4 "	11	5	45 45
5 "	4	1	25 00
6 "	1	0	00 00
7 "	4	0	00 00
8 "	3	2	66 66
9 "	1	0	00 00
10 "	2	1	50 00
12 "	1	0	00 00
36 "	1	0	00 00
	66	22	33 33

TOTAL CASES

Age	No Cases	Recoveries	Percentage
Under one year	13	4	30 76
1 year	62	13	20 96
2 years	81	25	30 86
3 '	85	32	37 64
4 "	90	35	38 88
5 "	43	19	44 18
6 "	26	7	26 92
7 "	29	10	33 33
8 '	13	8	61 53
9 "	7	3	42 85
10 "	7	3	42 85
11 "	1	1	100 00
12 '	3	0	00 00
13 '	1	0	00 00
14 "	1	0	00 00
20 '	1	0	00 00
36 "	1	0	00 00
43 "	1	1	100 00
60 "	1	0	90 00
	466	161	34.54

In this connection, I take pleasure in presenting a modified case of instruments which I hope will prove of great value If any instruments should be aseptic these certainly should be, and we are not meeting the demands of modern surgery unless all our instruments can be rendered perfectly aseptic Through the courtesy and cooperation of Chas Truax, Greene & Co , of Chicago, I am enabled to present this case of instruments which I believe to be a great improvement over previous ones The case itself, as you observe (Fig 1) is metallic and can be boiled or washed with antiseptic solutions without injury, and there is no plush lining in which to carry about the germs of the disease The introducer (Fig 2), varies in several respects from the ordinary instrument. The obturator has no joint and is attached to the introducer, while the different parts of the instrument can be separated and perfectly disinfected The novice will find this introducer very much easier to use than the original one The extractor is peculiar, in that all its parts can be separated as you see, (Fig 3) The gag is made so that it can be unlocked, the two blades separated and disinfected (Fig 4) Thus you see there are no crevices in which germs can find a hiding place beyond the reach of antiseptics In presenting these instruments, it is with the conviction that they will prove a valuable aid to us in the treatment of one of the most dreaded diseases of early life

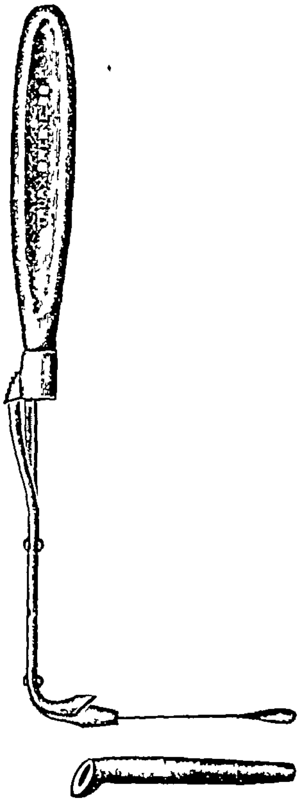

Fig 2

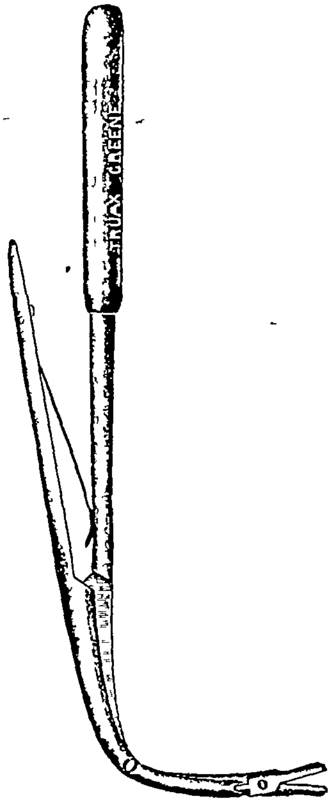

Fig 3

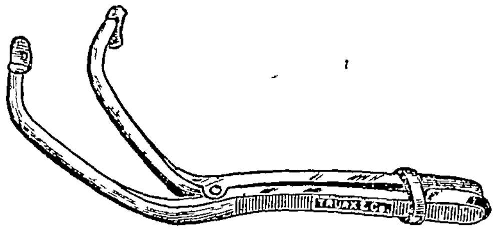

Fig 4

PRIMARY SYPHILIS AND GONORRHEA IN CHILDREN

Read in the Section on Diseases of Children, at the Forty fourth Annual Meeting of the American Medical Association

BY B MERRILL RICKETTS, M D
CINCINNATI, OHIO

In presenting this subject, I wish to call attention to the comparative infrequency with which these diseases are found in children under twelve years of age, and the tendency to overlook their characteristics, also to report the cases that I have seen bearing upon the subject

That the Hunterian chancre is not at all times recognized, when found upon adults, there can be no question That it is less likely to be recognized when found upon children, especially when it is found upon other parts of the body than the genitals, is a foregone conclusion The infrequency with which this lesion is met with in children, together with the few opportunities the average practitioner has of seeing it upon any other part of the body than the genitals, is no doubt the occasion of its being so often overlooked

These rules hold good in cases of primary gonorrhea in children To identify an acute inflammatory urethritis or vaginitis as being gonorrheal is a task not always easy, especially since the discovery of the gonococcus

The identification is especially troublesome when there is but one child affected and the cause unknown As I did not intend to enter into details in describing these primary lesions, but merely to report the circumstances surrounding each of them, together with the more prominent features, I must refrain from speaking of the etiology, treatment and subsequent results, none of them having remained under my care

Case 1—Male, age 12, white, German, robust, of humble parents, both of whom were dead Accompanied by a friend he consulted me in 1887, complaining of a sore about the anus Upon examination I found a hard chancre, about two weeks old I found, by persistent questioning, that the boy had been the victim of buggering That about four weeks previous a young man about eighteen years old, had practiced his vile habit upon this boy, whether willing or unwilling I was unable to decide The throat was sore and the temperature 99 degrees I advised treatment, but the lad never came back

Case 2—Male, age 12, white, robust, dark hair and eyes, was brought to me by his father in the fall of 1892 There was an extensive macular eruption over the whole body and extremities The throat was very much ulcerated and temperature 100½ degrees Rheumatism was complained of, and his general appearance was bad I informed the father that the boy was suffering with syphilis and that he had contracted it within six weeks from that time I accused the boy of having done something, but he would not admit anything until I had a private interview He then admitted that a man had thrown him down in a stable and had attempted to do something to him in his back parts some eight weeks before Upon examination I found the remnants of what I believed to be a hard chancre Everything pointed to the boy's statement having been true I found that Dr W E Lewis had been treating the patient, and I at once proceeded to ascertain all I could about the case Dr Lewis informed me that he had found a sore together with warts I at once referred the patient back to Dr Lewis for treatment, and I find that this was carried out with the usual results

Case 3—Male, age 7 white, robust, brought to me with a sore upon the lower lip, about the median line upon the vermilion border The lesion was about the size of a silver five cent piece and presented the usual characteristics I could not find any history whatever, so that I was compelled to rely upon subjective symptoms entirely The temperature was 101 degrees, face flushed and conjunctiva congested The submaxillary glands were somewhat enlarged, and the body and extremities covered with a fine macular eruption The mother stated that the sore had existed for about three weeks She gave no evidence of having syphilis, nor could give me anything to show that her husband did not have the disease The family was poor and no doubt associated with the demi-monde, whose lips so often carry with them the messenger of misery and death To my mind this was the source of infection Although advised to have the child treated, I was never again permitted to see it

Dr David DeBeck of Cincinnati, has tabulated ninety-seven cases of primary syphilis of the eyelids having occurred in the practice of the various oculists of the world This monograph is well worth reading, the cases having occurred in both adult and child life

ACUTE GONORRHEA —(SEVEN CASES)

This is exceedingly interesting, especially as the origin in each case was discovered

Case 1—Female, age 7, robust, poor parentage, blonde, acute gonorrhea

Case 2—Female, age 10, robust, poor parentage, blonde, acute gonorrhea

Case 3—Female, age 11, frail, poor parentage, brunette, acute gonorrhea

Case 4—Female, age 9, robust, poor parentage, blonde, acute gonorrhea

Case 5—Male, age 9, wiry, black-eyed, poor parentage, quick, active and looked upon by the neighbors as the toughest of the Arabian type This lad had a discharge evidently of six weeks' duration Had it been but three or four weeks old, I do not believe that he would have felt much like attempting such a feat The girls represented four different families, however, there were but three mothers who accompanied the four girls to my office The statement of the girls was identical in the main, although given privately at different times Each had a serious discharge, with great itching and tenderness, together with extensive swelling of the labia Although I did not make a thorough examination, I am satisfied that the lad did not penetrate very deeply It was, however, of sufficient depth to infect each child I could not determine the exact day it occurred, but would say some time within two weeks The indications were, that each girl consented to it In regard to the boy, I was unable to secure any information whatever He was as cool and unconcerned as though nothing had ever happened He was an experienced street urchin, whose life had been hardened by contact with the inhabitants of Gano Alley, a place which can not be surpassed in corruption and immorality That he was a frequenter of this district was well established, but who his seducer was will always remain a mystery

But one of these cases was ever again seen, and that on the following day, so I can not speak farther

Case 6—Female, age 11, white, robust, with dark hair and eyes, was brought to me by her mother who was a poor woman, earning her living as best she could, her husband having died leaving but little She stated that her child had done wrong and that she had a discharge I found that there was a purulent discharge with much redness, itching and tenderness Upon questioning, I found that they lived in a district parallel to Gano Alley so far as morals were concerned The boy was a neighbor, having secured the consent of the girl some four or five weeks previous

Case 7—Male, age 12, white, robust, of poor parentage Was visited by me on the following day I found a purulent discharge, evidently having existed a month or so He, too, was obstinate, giving no information as to who had victimized him

I do not think that the diagnosis in any one of these cases can be questioned, in the face of such evidence as has been produced in each case To my mind, the evidence is conclusive, without any search having been made for the gonococcus I regret that I could not have treated at least a few of them, especially as I am desirous of comparing the severity of the disease in adult and child life I should also like to follow these cases through life, and see what the influence of the disease is upon the organs of generation, as to whether or not the females would be sterile or would have inflammatory changes in the tubes or ovaries. Although I have no especial reason for making the statement, I believe that the virulency of both syphilis and gonorrhea is mitigated in childhood. I mean, of course, if the same rules governing treatment in adult life are carried out. I also believe that the primary and secondary manifestations of each are very much lessened as to time. The fever will perhaps be higher, as is the case with most all diseases of childhood. My experience would teach me, that it is an almost absolute impossibility to discipline such patients and prolong their treatment. One reason may be in the fact, that the parents desire to conceal the fact, and at the same time are ignorant of the ravages produced by the disease. It is to be noticed in the history of these cases, that the parents are all poor and the children were allowed to be on the streets, ad libitum. As there is very little written, bearing directly upon the subject of primary syphilis and gonorrhea in childhood, I feel that this report is justified by the hope that it may encourage reports of observations pertaining to this subject.

CHOLERA INFANTUM—ITS TREATMENT IN MALARIAL LOCALITIES

Read in the Section on Diseases of Children, at the Forty-fourth Annual Meeting of the American Medical Association.

BY J. SCHNECK, M.D.
MT. CARMEL, ILL.

The application of the term, cholera infantum, is so various, both in the medical profession and by the laity, that it will be necessary for me to define the term as I wish it to be understood in this paper. By it I have reference to a disease of early childhood, in which there is exalted excitability of the nerve centers and of their meninges caused by continuous high atmospheric temperature, producing high fever and causing sudden attacks of forced vomiting and frequent, copious, liquid purging, which if not controlled results in exhaustion and death in a short space of time. The disease is most common from the sixth month to the end of the third year of life. It may occur in the midst of perfect health in a well nourished and well fed child, or it may be preceded by symptoms of cerebro-spinal irritation, or it may occur during a preexisting diarrhea. In malarial localities it not rarely succeeds a regular paroxysm of intermittent fever, when this occurs during a time of protracted and continuous high atmospheric temperature. In my experience the symptoms which are usually the first to manifest themselves are increased restlessness with more or less dilatation of the pupils. The eyes have a bright, staring appearance, yet do not appear to see, or the mind does not seem to comprehend clearly. I have in some cases found this symptom present for twenty-four hours before the disease became fully developed. But usually with, or soon following these symptoms, there occur vomiting and purging, first of such food as may be in the alimentary canal. These first discharges are usually decidedly acid in reaction and have a peculiarly offensive mycotic odor, especially the dejecta. As the disease progresses the discharges become more liquid, the stools lose their peculiar odor and are watery and alkalin in reaction. When the disease becomes well established, vomiting and purging often occur at the same time, these are violent and sudden and are frequently accompanied by a sharp cry, as if produced by a spasmodic contraction of the whole alimentary canal. There is great restlessness, unquenchable thirst, suppression or diminution of urine, high temperature, usually from the beginning, in some cases going beyond 107 degrees F., shortly before death. Usually the flexor muscles are contracted, the thumbs fixed to the palms, the fingers clenched over them, the elbows and knees flexed and rigid, the muscles of the neck and trunk are often stiff and the head drawn to one side, pulse 150 to 200, extremities cold, fontanelles and sutures sunken, features collapsed, convulsions, coma and death. The duration of the disease in severe cases is usually from four to seventy-two hours.

My field of labor is in the southeastern part of Illinois, on the Wabash river, a region of country that is noted for hot nights as well as hot days (it being too far north to receive any effect from the Gulf breezes and too far south to be reached by the cool winds from the North and the Lake region, which occur during the evenings and nights in those quarters). Our nights are usually calm and exceedingly hot, there being much less atmospheric disturbance during the night than during the daytime.

Above, I have given a very brief sketch of a scene that has been only too familiar to me during the past twenty-two years in times of continuous high temperature. There is no class of cases that I visit with so much dread as I do one of these little patients. None of the authors whom I have consulted appear to recognize the disturbance of the nerve centers as the initial lesion of this disease, while in my experience it is usually the first and most prominent. In many cases the symptoms of cerebro-spinal congestion are so violent and rapid that the characteristic watery discharges are not a prominent feature until near the approach of death. This, I believe, is largely due to the greater amount of malarial infection of the system, in many regions.

I believe the primary cause of cholera infantum is continuous high summer heat persisting both day and night. Teething, indigestion, malaria and unsanitary conditions are responsible only in so far as they lower the vitality of the system. In cities, where the houses are built close together, a comparatively small proportion of the heat absorbed on a long hot day is lost by radiation during a short but cooler night, so that the inmates experience a continuous high temperature. I have never seen one of these cases occur in the country, except after there had been several successive days of continuous heat, varying from 90 to 100 degrees F. in the daytime and from 75 to 90 degrees F. at night. This condition we are liable to experience during the first weeks of June, or rarely the last days of May, and may continue to recur at intervals until the cooler nights of August come to our relief. It requires only one or two cool days, when this class of cases will cease to occur.

I think many of our authorities place too much stress on improper diet and feeding as primary causes, while they fail to give continuous high heat its proper prominence. I have frequently seen babies who were in perfect health and were taking nourishment from healthy breasts, taken suddenly and violently, but only in continuous hot weather.

The secondary causes are indigestion and fermentation of the food contents of the alimentary canal, including the decomposition of the natural secretions and excretions of the digestive tract, which occurs when digestion is checked Malaria also acts as a secondary cause, as it predisposes the system to congestion, especially of the cerebro spinal system Filthy and unsanitary surroundings are also potent *predisposing causes*

The preventive treatment should consist in physical and mental quiet, keep the body as cool as possible during the time of greatest heat Many of the cases that I have seen were precipitated by exposure in the hot sun, often over a rough road in a wagon or buggy, or what is still worse, in a baby buggy I know of no more severe test of a baby's endurance than to huddle it down among the clothing and covers in a baby buggy, then trundle it over rough streets and pavements, on a hot summer day I am sure that more than one half of my cases have had this or some similar experience shortly before the onset of the disease A hot show day is a typical occasion, and almost invariably gives us several of these cases before midnight

The food should be pure and easily assimilated Digestion should be aided artificially if necessary, and the slightest diarrhea should be treated very carefully and thoroughly To accomplish this end I have had very satisfactory results with

℞ Bismuth salicylate
Lactopeptin āā gr iii—v
This to be repeated every two to four hours

Remove thoroughly all unsanitary conditions, counteract malarial influences with large doses of quinin If it is not retained by the stomach, the following should be applied over the abdomen and spine every second hour

℞ Quin sul gr xxx
Spir frumenti ℥i
Acid sul gtt iii
Oleum olivæ q s ad ℥ii
Mix

If there are evidences of abnormal irritability of the nerve centers, I give *from one to five* drops of the fluid extract of physostigma venonosum, combined with proper doses of *bromid of potassium*, every one to three hours, until these symptoms are relieved, then continue as required from two to four times daily I feel confident that many cases can be prevented by carefully *and thoroughly* carrying out the above indicated treatment In severe cases when the disease is well established, especially after vomiting and purging have commenced, assimilation is often very slight or even totally absent, hence our efforts at treatment must be directed principally at the surface of the body In such cases I place the little patient on a rubber bag which has been filled with cold, *or* if the fever is high, iced water The bag should be long enough to reach from the top of the head to below the waist The head should be elevated *as much* as is compatible with comfort Inhibit exalted nerve action and tone up the paralyzed vaso motor nerves of the internal blood vessels by frequently repeated doses of physostigma and bromid of *potassium*, until their physiologic effects are produced In older children I have seen much benefit result *from the hypodermatic* use of morphin, but it is necessary to give it very cautiously, especially after the disease is well advanced and is approaching the stage of coma Enemas of cold water have proven, in my experience, to be objectionable and injurious, the temporary diminution of temperature is usually *followed by relaxation and* increase of the serous discharges in the alimentary canal To control the vomiting I have found nothing equal to the following

℞ Mor, sul gr ii
Carbol acid gtt ii
Aqua ℥iv
Mix Sig One teaspoonful every half hour as long as vomiting continues

One drop doses of a mixture of *equal parts of* tincture iodin and carbolic acid, given in cold water and frequently repeated, is also a valuable remedy

To allay *the* intense thirst and reduce the internal *heat, I have found great benefit from frequently* repeated, but small quantities of egg-water, made by stirring the white of a fresh egg in a half glass of cold barley water, or simply cold water with a few grains of salt or some brandy in it Crushed ice put in a cloth and held in the mouth is also very grateful

When, or before, the extremities commence to get cold, I apply large mustard draughts to all four extremities, first enveloping the fore arms and legs from the wrists to the elbows and from the ankles to the knees until they are red, then the arms and thighs, extending from the elbows *to the shoulders* and from the knees to the hips This should be continued until the skin over the extremities is thoroughly red from the effects of the remedy, after which it is only to be repeated when *the redness begins* to disappear I consider this a most efficient means of relieving central congestion, and from abundant experience I feel I can not commend it too freely

In addition to the above treatment, I endeavor to *stimulate* the secretions by giving small doses of calomel combined with bicarbonate of soda or prepared chalk, repeated every two hours When there is time to do so I endeavor to disinfect the alimentary canal and control fermentation with antiseptic remedies Of this class of agents I have employed bichlorid of mercury, peroxid of hydrogen, arsenite of copper, thymol, salol and listerin, but with *indifferent* and doubtful results They are of more value after reaction has been established and the case has assumed the character of an entero-colitis, which it will most surely do if the child *recovers from the* first severe attack In these cases it is necessary to continue the use of quinin freely If it can not be retained when taken internally, it should be used by inunction as recommended in preventive treatment To control the persistent diarrhea, I have found no remedy so efficient as *pulverized* gum opium combined with salicylate of bismuth, and I have frequently been *surprised* to find how much opium these little patients required, and how well they bear its use in large doses for many days together

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DENTITION, AND SOME OF ITS DISEASES

Read in the Section on Diseases of Children, at the Forty fourth Annual Meeting of the American Medical Association

BY MARION THRASHER, M D
SAN FRANCISCO, CAL

Normal dentition is comparatively harmless The teething in wild animals and barbarous nations is usually attended with no danger, and with but little inconvenience The young, however, of beasts confined in cages, rarely live during the period of teething

In our age of civilized refinement, abnormal dentition is the rule So deadly has it become, that one-third of the human family die before the twenty deciduous teeth have fully appeared Its danger is constantly increasing A few decades ago, when the practice of mothers nursing their children was more in vogue, the fatality was not nearly so great Latterly it has become unfashionable, and children are fed on artificial food, and the result is an alarming mortality Dentition in these children develops incidentally many diseases The commonest are irritative fever, indigestion — with its attendant evils, flatulency, constipation and diarrhea—cerebral convulsions, stomatitis capillary bronchitis and pneumonia Practically, it is almost impossible to, at times, segregate the foregoing diseases Clinically one, or most of them may be present, in the cutting of a single tooth Irritative fever is the most frequent The gums, irritated by the advancing tooth, generate a poisonous mucus, the salivary glands become abnormally active, and a rise in temperature appears This saliva is swallowed, and interferes with the digestion of food, that otherwise even would be difficult to assimilate Flatulency, constipation, or its opposite, diarrhea, are evils now present This, now poisonous ingesta, may produce, through reflex sympathy, cerebral convulsions

In childhood, the nervous system so preponderates that any irritant will readily disturb the delicately balanced equipoise Adults, with nerves trained to pain and suffering, know how toothache will derange the entire nerve system, and even increase a degree or two the body temperature

The infantile tooth gradually rising through the gums, producing continuous tension, develops varied forms of constitutional, as well as local disturbances The mucous membrane becomes red, hot, swollen and tender The saliva is greatly increased, and the itching over the protruding tooth is so annoying that to allay it the child tries to bite everything that comes in its way A nervous or irritative fever now appears The temperature will often rise to 104 or even 105 degrees, when eclampsia may come on Though "teething convulsions" have been denied by a few modern medical writers, yet their existence has so often been corroborated by clinical experience, their etiology can not be gainsaid During the coma of these convulsions, capillary bronchitis may arise as a complication, and when it does it is often fatal

Purulent conjunctivitis has often been found during the time the upper canine teeth are being cut In this case, inflammatory action is transmitted through the antrum of Highmore During dentition, eclampsia is very common, as well as fatal, in the children of drunkards, who also are more liable to gingivitis and the different forms of stomatitis

Coughs often accompany the appearance of the upper teeth, which resist medical treatment until after the teeth have fully appeared Exanthemata, especially eczema impetiginosum, may occur at this period which stubbornly resist treatment—and fortunately they do, for if cured, dangerous cerebral complications would present themselves, the skin disease forming as it were a safety valve

During the teeth evolution, the sub-maxillary glands are often swollen, and I have often seen the cervical glands enlarged and suppurating, especially in children of scrofulous or rachitic parentage

The treatment for all these diseases should be anticipated, and prophylactic The time worn saw of "an ounce of prevention" is especially applicable here Dentition is a dangerous period in a child's life, and should be jealously watched by mother and physician Conditions, hygienic and dietetic, should be most propitious

Every unfavorable complication should be met at the threshold, and if possible mastered Diarrhea, so common, is a safeguard in expelling from the system morbid material, and should not suddenly be checked Paregoric, so usually administered by the laity at this time, often works irremediable mischief in the stoppage of the flux which nature has wisely instituted for the benefit of the child Should it become chronic and weakening, it then should receive the physician's attention Usually, minute doses of hydrargyrum cum creta, bicarbonate of soda, and tannin for a day or two, followed by oil, will rectify the trouble Excessive temperature should at once be controlled by baths, lessening the food, enemas, and aconite Cutaneous affections should receive no attention during this period Capillary bronchitis pneumonia, and other diseases of the respiratory organs, should be treated as indicated, but prevented if possible Restlessness can often be overcome by hot baths, with aconite and the bromids If the tooth is just breaking through the gums, lancing it will often afford prompt relief Delayed dentition in young children may be remedied by vigorous constitutional treatment of pure air, wholesome food, bathing, cod-liver oil and citrate of iron and quinin

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THE TREATMENT OF DIPHTHERIA.

Read before the Camden County (N J) Medical Society

BY E L B GODFREY, A M , M D
PHYSICIAN TO COOPER HOSPITAL LECTURER ON MEDICAL NURSING IN NEW JERSEY TRAINING SCHOOL FOR NURSES
CAMDEN NEW JERSEY

I desire to call your attention, as announced in the program, to the treatment of diphtheria The subject is full of interest, not alone from the past and present prevalence of the disease, but from the startling fact that, despite the great advancement in sanitary science, diphtheria is more continuously present than any of the acute, contagious diseases Further than this, it can be said that diphtheria, despite sanitary science, has steadily advanced, and, for several years past, has maintained the character of an epidemic, in this section of the country I shall speak from the standpoint that diphtheria is primarily a local disease, that systemic infection is secondary to the local invasion, and beg to call your attention to the hygienic treatment the medical treatment and the preventive treatment

THE HYGIENIC TREATMENT

In the hygienic treatment, the selection and care of the sick-room and the care of the patient, as regards the toilet, are matters of prime importance Neglect in these particulars means danger of re infection and the further spread of the disease The sick-room should be selected in reference to its air-space, its exposure to sunlight, its ventilation and the isolation of the patient The care of the room is equally important All unnecessary furniture should be removed to obviate the need of keeping it clean and of disinfecting it after the termination of the disease Dust should be banished from the sick-room, because it irritates the throat and affords a medium in which the poison thrives Cleanliness during the progress of the disease, and the disinfection of the premises after its termination constitute, in the main, the duties of the nurse-attendant However trite this may seem, it is so rarely carried out, that it will bear iteration and re-iteration until every patient knows its worth None of the infectious diseases require greater cleanliness, or more thorough disinfection for their stamping out, than diphtheria The temperature of the room should be kept at 68 degrees, and continuously moistened with steam, medicated with turpentine, thymol, or eucalyptol, etc, especially so if laryngeal invasion has taken place, when the temperature should be both warm and moist

Care of the patient's toilet, and frequent changes of bed clothing are needed, on account of the liability of their becoming soiled with sputa, and the salivary and pharyngeal secretions, which contain the virus of the disease This is not extensively diffused in the room but attaches itself to the clothing, bedding and the sick-room appliances All soiled clothing should, therefore, be disinfected with boiling water before being removed from the room These points are not insignificant, their observance will not only mark the difference (when the disease is treated from its initial stage) between a short or long continued case, but the difference between the limitation of the disease to one in the household or the infection of others The confinement of the patient to the bed, as well as cleanliness in the toilet, is a matter of moment This should be done during the progress of the disease and for a considerable time after convalescence is established Three weeks is not too great a time for the confinement of a case of ordinary severity I make confinement in the bed an imperative rule, so long as there is noticed disturbed rhythm in the action of the heart Rest in bed tends to ward off renal complications and paralysis, which are the most important sequelæ Paralysis takes place, as a rule, during or after the establishment of convalescence and may follow a mild case It is claimed to be due to absorption of the ptomaines or the poisonous products of the specific bacteria, and is regarded as a toxic neuritis with degenerative changes of the nerve tissue This accounts for the great exhaustion, the tendency to paralysis and for the extraordinary slowness of the recuperating process Even after apparent recovery, paralysis, either local or general, may supervene, so slowly does nerve tissue regain its power Its tendency to paralyze the heart, through inflammation of the cardiac nerves, makes the disease one of constant dread Sudden exertion contributes to heart paralysis, when degenerative changes have taken place in the cardiac nerves or in the structure of the heart Rest in bed, therefore, should be insisted upon until health is practically regained

THE MEDICINAL TREATMENT

The medicinal treatment of diphtheria, though far from satisfactory as the variety of treatments in vogue indicates, is not so much a matter of speculation as formerly, since the bacterian origin of the disease has been established The bacillus of Klebs-Loffler is now claimed, by our best authorities, to be the exciting cause Experimentation has shown that cultures of these bacilli inoculated into the larynx of animals will cause diphtheritic exudation with necrosis of tissue, and that the injection of their ptomaines into the blood will cause paralysis allied to that belonging to diphtheria From this relationship of cause and effect and with these premises admitted, the conclusion is irresistible that diphtheria is the result of their activity within the throat Still it is claimed that the bacilli are not found in the blood even during the period of systemic infection, but are found, in connection with other bacteria, in the diphtheritic exudation These germs, coming in contact with the mucous membrane of the throat, excite inflammation, destroy the cells of the superficial epithelium, which destruction constitutes the false membrane This, for a time, is so closely adherent to the underlying structures as to prevent the poisonous products of the bacteria from being absorbed, unless the membrane of the throat is in an inflamed or ulcerated state, when systemic infection is frequently first observed Following the state of inflammation, cell destruction and the formation of false membrane, there follows a condition of suppuration, tissue necrosis, detachment and abrasion, during which the toxic products of the bacteria are absorbed by both lymphatics and blood vessels and the system consequently contaminated Believing this, the medical treatment of diphtheria will be presented from both a local and constitutional standpoint, but only in so far as the treatment relates to cases under my care at the present time

THE LOCAL TREATMENT

The local treatment should be directed to the arrest of the development of the Klebs-Loffler bacilli This can best be done by thorough cleanliness and thorough disinfection of the nose, mouth and throat, since the membrane in the early stage of the disease can not be removed Forcible detachment of the membrane is condemned, because it affords both an easy ingress for the virus and makes applications painful to endure Thorough cleanliness, however, of the nose, mouth and throat is imperative Broken down tissue, mucous accumulations and sordes must not be allowed to accumulate Free expectoration should be encouraged and the sputa receptacle kept filled with a disinfecting solution For cleansing the teeth, mouth and throat, vinegar and water, lemon juice, glycerin and water, claret wine and water or pine-apple juice and water will be found of advantage, both on account of their being palatable, and because of their tendency to arrest, from their acid nature, the development of the germs Thorough and repeated disinfection of the mouth is required in addition to cleanliness, and under no circumstances should the nose be neglected in either of these particulars

For the treatment of the throat, the gargle, the spray and the swab, insufflation, inhalations and ice are used The gargle does not affect the posterior part of the throat and, if pain is caused by throwing the head backward, is discontinued The spray is repeatedly used, and corrosive sublimate dissolved in fluid extract of pinus canadensis, glycerin and listerin has proven the most satisfactory, although the sulpho-carbolate of zinc dissolved in glycerin and listerin, and the peroxid of hydrogen, glycerin and water have given good results. The swab, made of absorbent cotton, affords the best service. By this method of direct application, every part of the throat can be reached, and upon it rests largely the success or failure of the local treatment. A combination of corrosive sublimate, cocain, Monsel's solution and glycerin is my chief reliance. Occasionally, I employ salicylic acid, glycerin and alcohol, or the nitrate of silver, or peroxid of hydrogen and glycerin. For insufflating, when this can best be done, calomel is used, after the membrane has become detached, leaving an abraded surface, aristol and boracic acid are employed. For inhalations, medicated steam is used of which I shall speak later. The use of ice is encouraged for the double purpose of allaying thirst and reducing congestion. Its application to the neck has been abandoned for warm or hot applications, especially during the process of sloughing of the membrane. As an application to the enlarged and painful glands, ichthyol and lanolin, or hot medicated flannels are used.

If it is true that diphtheria is due to the activity of specific germs, then the importance of local treatment is admitted. If admitted, then the treatment should be directed to arresting the development of the germ. To accomplish this, the ante bacterian solution must be placed in direct contact with the germs. The success of the treatment, therefore, depends upon its thoroughness, and the accomplishment of the object sought. This requires patience, skill and courage. But when applied with this definite object, at least every hour of the first day, the disease will be cut short in its death-dealing progress. The disease makes rapid inroads. The child should be awakened for local treatment, because local treatment is more important than sleep. It will be observed the cleaner the throat is kept, the milder will be the disease.

THE CONSTITUTIONAL TREATMENT

The object to be accomplished by the constitutional treatment is to combat the effects upon the system of the toxic absorption from the throat. This, excluding the sequelæ of paralysis, bears a definite proportion to the throat deposit. It consists chiefly, as has been stated, of a toxic neuritis, with impoverished blood, etc. To combat its effects, there is no specific remedy. To place the patient under the best sanitary environments, to regulate the secretions and to maintain the strength by regular feeding and tonic remedies is the object to be attained. For this, a combination of corrosive sublimate and tincture of the chlorid of iron is first employed. The corrosive sublimate is pushed almost to its toxic effects, but is withdrawn if symptoms of gastro-enteritis present themselves. It has not given me the satisfaction in diphtheria that has attended its administration in scarlet fever. As soon as the necrotic condition appears within the throat, a combination of the chlorate of potassium and Basham's mixture is given. Basham's mixture is more easily absorbed than the tincture of chlorid of iron, and proves of better service in stimulating the function of the kidneys. The depressing effect of the chlorid of potassium upon the heart must not be forgotten. The condition of the heart should always receive attention. The danger of heart paralysis from neuritis of the cardiac nerves or from endocarditis is always present, especially during convalescence. The least disturbance in its rhythm or the first appearance of a slow or a rapid pulse, calls for special treatment. Strychnia, or the tincture of nux vomica, digitalis and stimulation are employed according to the condition of the heart's action.

Regular feeding, during the day and night, is very important, because diphtheria, more than any of the acute diseases, tends to exhaustion. In difficult deglutition or continued nausea, nutritive enemata are resorted too. The food is given hot, and in liquid form. Milk should be the basis, and to vary the taste, which is an important item, may be given in coffee, tea, cocoa, wine, oyster juice, clam juice, with vanilla, nutmeg, or eggs, or in the form of whey, junket, gruels, custards, etc. If curds are vomited, peptonize the milk, beef juice and beef pulp should also be given.

For laryngeal invasion, steam inhalations are given. The steam is medicated with turpentine, eucalyptol or carbolic acid, introduced into a tent under which the patient is continuously kept. Calomel is given internally with stimulants, vomiting is early induced and if dyspnea is not relieved, intubation or tracheotomy are recommended.

For nasal complication, indicated either by the odor or the discharge from the nostrils, the nostrils are syringed every half hour or hour with a warm solution of corrosive sublimate.

THE PREVENTIVE TREATMENT

The importance of this treatment will be admitted when I tell you that 2,624 cases of diphtheria were reported to the Board of Health of Philadelphia, from January 1 to October 28, 1893, with 750 deaths, making a death rate of 28½ per cent. During the same period, in Camden, 220 cases were reported to the Health Board with 56 deaths, making a death-rate of 25½ per cent. These are startling figures and prove that the principles of preventive medicine are not practiced to any great extent by physicians or executed by public health officials. Were cholera or small-pox present in either city to the extent that diphtheria prevails, both cities "would be up in arms."

To subdue the disease, isolation and disinfection must be insisted upon. These principles, as they relate to the patient, have been considered. Equally important is it that disinfection be applied to the premises. To insure the practice of isolation, cleanliness and disinfection in diphtheria, the people must be educated to the fact that the virus of diphtheria does not come from the breath of the patient, but from the sputa, the salivary and the laryngeal secretions, that the virus possesses the powers of life and development, and that it attaches itself to clothing and furniture, and in order to destroy it, the disinfectant must come in absolute contact with it and must be of such a nature as to destroy life. This education is the province of health officials, and if made a part of the policy of boards of health, the prevalence of diphtheria will be materially checked.

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THE CURABILITY OF NASO-MUCOSITIS [1]

BY THOS F RUMBOLD, M D

SAN FRANCISCO, CAL

(*Concluded from page 888*)

PART III

Dissatisfied Patients—There are two classes of patients who visit a physician for consultation, with regard to suspected or painful disease of the upper air passages, that are almost certain to be dissatisfied with the promises given them one, those who expect to be cured in a few weeks at most, the other, those who have come to the conclusion, because of many disappointments, that the disease can not be cured

The First Visit to a Physician—Take an individual of the first class, about thirty-nine years of age, who has had little or no painful experiences connected with the disease He is conscious of a little more flow of secretion in the back part of the throat than he thinks should take place He has been clearing his throat every morning for five or six years, but seldom has gagging spells with these efforts, and were it not that he has heard the subject spoken of very frequently, or has read in the newspapers of the symptoms of nasal disease quite similar to his own, he would not be any more mentally disturbed than he has been physically troubled by the presence of the flow But all of these circumstances are sufficient to cause him to consult a physician, thinking that he will very quickly be completely cured When informed that his complaint is a chronic one, consequently it has been progressing so painlessly that he has been entirely unconscious of the injurious and comparatively permanent changes that have taken place in the blood vessels and nerves, as well as in the mucous membrane of his nasal passages, and that it will take a rather long course of treatment before the recuperative powers of his system can repair the damages thus insensibly produced, he is surprised He can not understand why *it is that* it takes so long to cure a painless and almost sensationless disease When informed, as he should be, that the blood vessels of the nasal passages were so slowly enlarged that no pain was produced, though the inflammation was injurious, nevertheless, and that so long as the inflammation exists, these injurious effects will continue to increase, also that this slow process can not be eradicated except by slow degrees, he will still remain unconvinced, unless he has confidence in the physician He may, however, be so favorably impressed with these statements as to place himself under the physician's care

Many times it is difficult to control such a patient in regard to hygiene, and the more ignorant he is as respects the laws of health, the less is he controlled, especially if he has contracted any bad habits—as have the great majority of such persons—such as the use of tobacco or stimulants As he has had little or no pain of which to be relieved, he will feel but slight change as a result of the local applications used by his physician, unless he is cognizant of the decrease of the flow of secretion in the nasal passages and throat, and observes that he is *not taking cold* as frequently nor to so severe a degree as formerly If these two important evidences of improvement are not observed and do not produce a decidedly favorable impression upon his mind the continued restraint in regard to his habits will be almost certain to cause him to discontinue medical treatment If he does discontinue treatment, in a few months he will find himself taking cold far more frequently and in a severer degree than formerly Having heard some of his friends recommend one of the latest "catarrh cures," advertised in the newspapers and shown in the drug store windows, he may expend a few dollars for it This "cure" may give him a little relief for a short time Then he will find to his sorrow that the "thing is doing more harm than good "[6] He now discontinues his self-treatment and finds that his air passages are more comfortable without the much advertised " cure "

With the next change of the season, either spring or fall, he is made certain, by frequent and severe colds, that he has nasal disease of a painful form He may now visit one of the many advertising men who promise a cure for a small sum paid monthly These trials will consume about six months' time, when in disgust he will try the virtues of a change of climate Usually the wily advertising man suggests this course to get rid of a troublesome customer It makes but little difference where he goes, he will improve in health, much to his delight The discontinuance of injurious methods of treatment and the change together being the cause thereof In six months he takes another cold, which causes a severe cough, and for this he visits a physician who prescribes and the cough disappears In a week or two, another but more severe cold is taken, the prescription *does not* cure the cough this time His strength is now affected, he loses in weight, he goes to a large city and consults some one who has a reputation for curing lung troubles He is told that his lungs are all right, but that his stomach and it may be, his liver, are out of order If calomel—that best of all killers of microbes which now have a rich soil in his *primæ viæ*—is given in small quantities and continued for some time, he will suddenly improve greatly, showing the intimate relation between the stomach and bowels [7] He is now thoroughly aroused and takes good care of himself discontinues all excesses, especially tobacco and stimulants, which he is satisfied are injurious to him, and remains in comparatively good health for some months

Overgrowths in the Nasal Passages—At the next change of the season he takes another cold, which is so severe as to almost shut off his nasal respiration All this time his rhinitis has been progressing painlessly He has the nasal obstructions removed and is greatly relieved feeling as though he had another lease on life and comfort [8] These obstructing masses are the result of years of continued inflammation, and this inflammation will not be reduced by the mere removal of the growths If the reduction of the inflammation is not brought about, either before this removal or afterward, one or two years at most, with no unusual exposure, are all that is required for him to again experience an impeded nasal respiration, bringing back not only the former disagreeable symptoms, but others in addition, for the operations themselves will assist by their irritation in exciting increased inflammatory action, the influence of which may extend to the brain, where it may manifest itself by the appearance of mental phenomena of various kinds.

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[1] The term, naso mucositis " is formed from the word mucosa the mucous membrane with the usual termination, itis,' that indicates its inflammation, and the prefix naso which limits the inflammation to the nasal passage

[6] All these ' sure cures ' are composed of materials that at first afford relief but afterward surely inflame the nasal passages I have examined eighty four of these cures ' Of these carbolic was in sixty four, camphor in forty nine and cubebs in forty eight All of these agents will produce a cooling and relieving effect the first few times they are used but in a short time the injurious effects will be experienced

[7] While the calomel will destroy the microbes in the stomach and bowels it will not check the supply which comes from the nasal passages

[8] These operations are essential to the permanent recovery of such a case but after the removal one should receive a course of local painless applications, followed by supplementary courses

It is chiefly because of futile efforts, as those just detailed, that many victims of nasal inflammation, and they form the *other class* of dissatisfied patients above mentioned, come to the conclusion that "the disease can not be cured." This man now belongs to the "other class" and for illustration, his case will be followed still further. He is now thoroughly convinced that nothing can cure him, he has tried everything, consulted the most renowned medical men, and yet the complaint is on him in a worse form than ever. His nasal inflammation has now extended into the ethmoidal sinuses by continuity of structure, thence into the brain by blood vessels and nerves, as demonstrated by the exhibition of such common mind troubles as the following: he is forgetful, he is cross, he can not attend to his business as formerly, he can not think consecutively, his mind flits from one subject to another, he can not even read with satisfaction. When in his office he can not hold his mind on his business long enough to attend to it, and when in his bed he can not take his mind off it, consequently he can not sleep, his appetite is poor or capricious, he loses all ambition, becomes melancholy and nervous, is fearful that his mind will become seriously affected, and as a consequence of all this he is dreadfully tired of life.

"*Nervous Prostration*."—It is a popular thing to flatter such a person by telling him that he is suffering from mental over-work and "nervous prostration" in consequence thereof. This diagnosis has some apparent ground, for such an individual is excessively "nervous" in disposition and actions. Generally if such a person accepts the advice urged upon him by his friends, and rests his brain, he will find but temporary relief from this enforced absence from his business. No healthy man's brain work causes 'nervous prostration." The very great majority of those who are supposed to be affected with this popular ailment are really suffering from *undiscovered naso-mucositic inflammation*. In such cases, the chronic disease has been twenty or more years located immediately under the anterior portion of the brain. This portion of the mental organ being intimately connected with the ethmoidal cells, by both blood vessels and nerves, must seriously affect the brain, consequently affecting the mentality of the individual. It will be useful in this place, to see how this diseased action is brought about. This we can learn by an examination of the anatomy of the nasal passages and ethmoidal cells, and see how they are connected with the brain.

Vascular Connection Between the Nasal Passages and Ethmoidal Cells and the Brain.—The cranial carotid artery gives its first branch, the ophthalmic, to the eye, and this sends two branches to the nasal cavities. The first of the latter, the posterior ethmoidal artery, passes through the posterior ethmoidal foramen, supplies the posterior ethmoidal cells, and ascending, enters the cranium, gives off a meningeal branch which supplies the adjacent dura mater, then descends and again enters the nose through an aperture in the cribriform plate and is distributed to the superior turbinate processes. The anterior ethmoidal artery, also a branch of the ophthalmic, passes through the anterior ethmoidal foramen, supplies the anterior ethmoidal sinuses and, entering the cranium, divides into a meningeal branch, which supplies the adjacent dura mater, and a nasal branch, which descends and again enters the nose through an aperture in the cribriform plate, and is distributed to the middle turbinate processes. It is seen that the anterior portion of the meninges are stitched, as it were, by these arteries to the upper portion of the nasal passages, giving an excellent opportunity for the transference of diseased action from the nasal passages and ethmoidal cells to the brain, and experience proves that such is frequently the case, as in the case of "nervous prostration" above mentioned.

Relieve the naso-mucositis, and the "nervous prostration" occasioned by the transference of the nasal and ethmoidal disease to the brain, will be relieved also. Instead of calling the ailment, "nervous prostration," it should be called a *mental and physical debility*, for such is the condition of the patient.

In relieving the nasal and ethmoidal trouble, the stomach is relieved of the continual unconscious flow of disease-producing, muco-purulent secretion that is passing into it day and night from the pharyngo nasal cavity, which in turn occasions indigestion and in this way *physical debility*. The relief of the nasal and ethmoidal inflammation also relieves the secondary or brain trouble which occasions the *mental debility*. That the exercise of the brain is exhausting to such a person is apparent, but this is not from mental over-work *per se*, but because this organ is weakened by the nasal disease, whose seat is located immediately under it. Remove this inflammation and he can perform severe brain work, not only without exhaustion but with pleasure, just as the healthy muscular man performs physical labor with pleasure.

This course is but rarely pursued. The victim of so-called "nervous prostration" usually visits some of the popular springs in this country or in Europe, and experiences a little relief, but this is the most. Such a person, having lost almost all confidence in medical men, rarely visits a physician of his own motion. He is usually urged to consult some one, or is taken there by a friend. His story is a long, wearying one. It appears as though it was his effort or aim to prove that he can not be cured by any means or method.

Despair of Being Cured.—He is exactly in the opposite state of mind from what he was in at his first visit to his physician, at which time he thought that his painless disease should be cured in a few months at most, and was astonished when informed that it would take "three or four years" of supplementary courses, before he could be permanently cured. He has now wasted three or four years in the use of what he thought was as good, and certainly very much cheaper means of cure. Consequently, he is in a far worse condition than when he first consulted the physician, instead of being perfectly well, as he could have been.

Can such an individual be so treated that he will lose all of these most distressing symptoms? Yes, but they will not all disappear at once, nor any of them in a short time. It will take a greater number of treatments than when he first presented himself, improvement will take place during the first few weeks more rapidly than afterward, for the reason that many of his most disagreeable symptoms are due to acute inflammation, which yields in a comparatively short time to local and constitutional treatment, but the chronic inflammation, which means enlarged blood vessels of the nasal passages and brain, diminished function of the mucous glands of the nose and stomach, and perverted action of many of the nerves of these health controlling organs, yields only after several months of preliminary treatment followed by several years of supplementary courses.

"Years?" says some one. Yes, is not this far preferable to *never?* Is not even very slow improvement far better than slow increase of disease, as well as the increase of the severity of its many mental sequelæ?

RECURRENCES.

"Will the catarrh return after I am cured?" That is a very proper question and is nearly always asked by patients. A fretful medical man, fretful because he may be himself a victim of reflex naso mucositis, might answer by asking the following questions: "Is it possible for me to treat you for a fractured arm so that you could not break it again? Could I cure you of a burn so that you could not burn yourself again? Can I treat you for a cold, and its effects on the mucous membrane, so that you could not take another cold if you tried to do so? In other words, can I cure you so that you could not expose yourself again? Or shall I rather try to cure you of your habits of exposing yourself to colds and other irritating influences?"

While these answers are in every respect answers to the patient's questions, yet they do not give enough information, such as to teach him how to prevent the return of the disease, a matter of very great importance to him.

Here are the answers I almost invariably give:

1. "Yes, the disease will be certain to return if you continue your former careless habits of life, using no precautions to prevent taking cold, and if you continue to use tobacco and stimulants, and be indifferent in regard to clothing, that is, if you are not cured of the customs and habits that induced the disease, showing the return of the disease will be entirely due to your own fault."

2. "No, the nasal trouble will not, or more properly can not, return if you live consistently with the laws of health. How is it possible for it to return if proper care is taken?

"To prepare a person so that he will be affected with chronic naso mucositis, one must expose him for a number of years so that he will take numberless colds, or must cause him to commit excesses for many years. I challenge any one to produce, as it were, a case of chronic nasal disease in any other way.

"After one is cured of chronic naso mucositis, the disease can not return unless the patient again commits the same acts that produced it. Being cured, the mucous membrane of the nasal passages is in as healthy a condition as that of the mouth or eye. It is in the diseased eye and the diseased nasal passages that cold is taken. An eye in a normal condition will not be affected by colds, neither will a normal, that is, a cured nasal passage. One will take a cold in a fractured arm before, not after recovery.

"If one has been treated for several months, and continues to take cold, even when he is doing the utmost to prevent it, this proves that *he has not been cured,* for a cured person will not take cold, unless greatly exposed, and that for a number of weeks and may be months.

"No person, after once undergoing a course of treatment for naso-mucositis, should ever again experience symptoms as severe as he had previously to being treated. In fact, he should have no nasal trouble at all. If he does, and is fairly well-informed, it is his own fault and he knows it and does not care to change his course of life to prevent it."

It is certainly a very proper as well as a very reasonable request to make of patients, that they will strictly observe the conditions of health, as they would if suffering from any other disease, that is, that they use their utmost endeavors to prevent a renewal of the causes of the disease.

Is this possible? Yes, always possible. It is not because of the inability of patients to discontinue the disease producing habits and customs, or to conform to conditions that will assist in bringing about a recovery, that the disease returns. Many times it is on account of ignorance and many times because of the strong hold that these customs and habits have upon them.

What can be Promised.—As a general rule, if the patient with uncomplicated naso-mucositic inflammation, who is under fifty-five years of age, will take care of himself and receive a perfectly non-irritating local treatment, and suitable constitutional treatment, he will recover entirely. He will notice an alleviation of all the acute symptoms immediately after he commenced treatment, usually a patient under thirty-five years of age notices an alleviation and on the first day. With every grade all violent symptoms disappear permanently in a few weeks, at the farthest. If the patient continues to observe the laws of health and receive the supplementary courses upon the completion of his *first course,* he will in a few years, at farthest, lose all tendency to a recurrence of the disease. The mucous membrane of the nasal passages, throat and ears will have regained its normal resisting power so that usual exposures will not result in colds as formerly. Such a patient may, once in a year or so, take a little cold in the head, *but only upon unusual exposure.* These colds will not be nearly so severe nor last so long as those formerly contracted. Should one or two local treatments and suitable constitutional treatment be received, every vestige of inflammation will quickly disappear, not to return until the patient again unusually exposes himself.

During this time and after this time such a person's life will not be disturbed by any disagreeable physical or mental symptoms as formerly, in other words, *he will be in a healthy condition.* A grand result, indeed a result, I am sure, that means many additional years of life. Being in health, if he lives in obedience to the laws of health, of which he should not be ignorant, he will remain healthy. His continued health will be the great reward of his small services to the goddess Hygeia—a goddess who never allows her devotees to go unrewarded.

Those patients of the fifth grade, who are over fifty-five years of age, will also be almost as quickly relieved of all painful symptoms as those of the fourth grade, but they will require a few treatments each fall and spring during life to maintain them in continuous relief, although as already stated, a great many in this grade do pass one or two, or more, years without requiring a treatment If the great pathologic changes that have been taking place during many years are kept in mind, I am sure no complaint would be expressed at the incompleteness of the cure, especially so when the patient is experiencing relief all the time that he is taking the supplementary courses, and really feels, not only entirely free from disagreeable symptoms, but would coincide with his physician, were the latter to assert that the complaint was completely cured

THE TORSION OF ARTERIES FOR THE ARREST OF HEMORRHAGE

Read in the Section on Railway Surgery, at the First Pan American Medical Congress, Washington, D C, Sept 6, 1893

BY J B MURDOCH, M D
PITTSBURG PA

To the members of the National Association of Railway Surgeons who were present at the meeting held at St Louis in May, 1889, this paper will contain little that is new The interest taken in the subject at that time was so great, and the discussion which it elicited so animated, that I am encouraged to bring it before this larger audience of the Pan-American Congress The subject is, in my opinion, so important that every surgeon should be familiar with it Since the reading of the paper referred to, I have continued to practice and to teach this method of controlling the hemorrhage from wounded arteries and veins, and increased experience only confirms me in the value of this method as a hemostatic What I shall now say is a reiteration of what I have already said, with the addition of a later and larger experience

There is no subject of greater interest to the practical surgeon than the arrest of hemorrhage This remark is equally true, whether the hemorrhage comes from a wound accidentally inflicted or made intentionally by the surgeon's knife Without the means of stopping the flow of blood from bleeding vessels the surgeon's art would be greatly crippled, and surgical operations where blood vessels must be divided would be impossible There is no sight so appalling as a formidable hemorrhage When a large artery is opened the blood gushes out in an angry stream, the face becomes pale, the color leaves the lips, the respiration becomes sighing, the heart fails to beat, and death soon closes the scene Surgeons from the earliest ages have shared with the people this dread of hemorrhage, and have ever been striving for the best means for its control Upon no subject has our profession been more conservative than upon this one, the arrest of arterial hemorrhage

Since the time of Celsus, notwithstanding the numerous methods which have been proposed for this purpose, but two, viz the actual cautery and the ligature, have received the indorsement of the profession But if the profession has been slow to indorse new methods, its confidence once gained has been most unwillingly surrendered From the time of Archigenes, who practiced in Rome shortly after the time of Celsus, up to the time of Richard Wiseman, Sergeant-Surgeon to King Charles II, the red hot iron was the sole method employed Thus this method of checking hemorrhage after amputation not two centuries ago, was the same as that used for fifteen hundred years previous The pertinacity with which surgeons adhered to the use of the actual cautery after Paré's great discovery of the ligature well illustrates the fear in which surgeons stood of hemorrhage They had used and had seen their fathers use, the red-hot iron, and, notwithstanding the pain it caused and the interference with primary union, they were unwilling to discard the agent which long usage had taught them was successful

In 1564 Ambrose Pare published his new discovery, which, to use his own language, "was taught him by the special favor of the sacred Deity" In this publication, as is well known, Pare demonstrated the value of the ligature as a hemostatic But, owing to the extreme fear of hemorrhage, and the criminal neglect of surgeons, it was two hundred years before it was adopted by the profession, and then it came into favor through the influence of Sharpe, one of the surgeons of Guy's Hospital, London, who boldly championed the claims of the ligature to popular confidence Since this time nothing has dislodged the position which the ligature has held as a hemostatic in the opinion of the profession The efforts made by Sir James Y Simpson of Edinburgh, to substitute acupressure, and the still more recent endeavor of Dr S F Spier of Brooklyn, to substitute constriction for ligation have most signally failed The same statement may also be made in regard to torsion as a means of arresting arterial hemorrhage It has not received the support of the profession to any great extent, but, unlike the other rivals of the ligature, it has had champions for hundreds of years, and still holds a place as a valuable means of arresting hemorrhage The subject has received but little attention from modern surgeons The twisting of an artery to arrest bleeding is of ancient origin It is spoken of by Celsus A fact often observed, that an arm or leg may be torn from the body with the loss of only a few drops of blood, no doubt suggested the method It has been advocated by such surgeons as Amussat, Dieffenbach, Schroeder and Syme But the credit of bringing it prominently before the profession and establishing its efficiency is due to Mr Bryant, the late distinguished surgeon of Guy's Hospital, London At this Hospital the ligature is seldom used, torsion being chiefly relied upon Mr Bryant tells us, in the last edition of his "Surgery," that in two hundred consecutive amputations of the thigh, leg, arm, and forearm all the arteries were twisted, one hundred and ten of them being the femoral artery, and that in no case was there secondary hemorrhage

Mr Bryant says "The physiologic arguments in favor of torsion are very great, and the practical advantages seem to be no less After seven years' experience in its practice, applied to vessels of all sizes, the femoral being the largest, I have had no mishap I have observed that wounds have united more rapidly and kindly, primary union being the rule There has been less constitutional disturbance after operation, and consequently less liability to traumatic fever, pyemia, and other complications, such as we are all too familiar with in the practice of surgery I have had stumps heal in a week, and the patient up in two weeks, without one single drawback, rapid and uninterrupted convalescence following the operation

That Mr Bryant never lost his faith in the efficacy of torsion as a hemostatic, is evident, from the following letter received from him shortly after my first paper upon this subject had been published

65 Grosvenor St , Grosvenor Square, London,
January 11, 1887

Dear Dr Murdoch —I have to thank you for your *Pittsburg Medical Review* and your article on "Torsion" It is very gratifying to me to find my teaching has had such a happy influence in your country, and I trust I may not lead you into wrong ways I adopt torsion as generally as ever, and so *do most of my* colleagues The carbolic catgut ligature is only a second best How wonderfully our art is advancing, and how we reciprocally learn from one another across the Atlantic, and thus forge permanent links of friendship and good feeling Ever yours truly,

Thomas Bryant

Having given this experience of Mr Bryant, I desire now to give my own as observed at the Western Pennsylvania Hospital at Pittsburg At this Hospital, torsion is almost exclusively relied upon to check the hemorrhage from wounded arteries or veins, whether the wound be produced by the surgeon's knife or otherwise My experience with torsion as a hemostatic, dates back to the year 1872, when I became a member of the Hospital staff My colleagues had, previous to my connection with the Hospital, been twisting arteries as large as the radial and ulnar The facility with which this was done, and the fact that the wounds healed kindly and without secondary hemorrhage, induced me to follow their example, at first timidly, but with success came confidence Having been successful in the amputation of a forearm with no untoward result, I ventured next to twist the brachial after the amputation of an arm, soon after this, the axillary, and then the popliteal, and finally the femoral And now, for the past twenty one years, torsion for the arrest of hemorrhage after all surgical operations, has been the recognized and almost the only method resorted to at this Hospital It is to be regretted that records have not been kept of the number of large arteries which have been twisted to arrest the hemorrhage

The following is a table showing the number of arteries divided in cases of amputation, where torsion has been resorted to for the arrest of hemorrhage at the Western Pennsylvania Hospital, Pittsburg

Femoral	160	times
Popliteal	24	“
Axillary	24	“
Anterior tibial	405	“
Posterior tibial	405	“
Brachial	115	“
Radial	59	“
Ulnar	59	“

There are two methods by which the torsion may be applied, as is illustrated by the accompanying cuts 1, Limited torsion, and 2, free torsion In the first method two pairs of forceps are required The first pair grasps the vessel at its cut extremity and pulls it from the sheath It is then seized by the second pair at a point from one-half an inch to an inch above the cut extremity of the artery, this second pair being held at right angles to the long axis of the vessel The first pair is then given three or four sharp turns

By the second method (free torsion) only *one* pair of forceps is required It is the one recommended by Mr Bryant as not being so likely to injure the external coat of the artery And this is the method which was adopted in the cases which I have given A good pair of forceps is required which will hold the end of the artery firmly, which has no lateral motion, and with serrations blunt enough to obviate any laceration or cutting of the parts seized by the blades The vessel should then be drawn out as in the application of the ligature, and three or four sharp rotations of the forceps made In large arteries, such as the femoral, the rotation should be repeated until the sense of resistance has ceased The ends should not be twisted off In small arteries the number of rotations is of no importance, and their ends may be twisted off or not, as may be preferred In all of the cases mentioned in the above table, free torsion of the arteries and veins was the method resorted to, to control hemorrhage

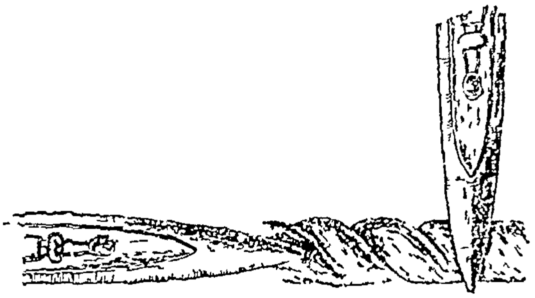

Fig 1 Limited Torsion

In addition to these cases, of which we have a record, torsion has been the method resorted to in all other surgical operations performed during this period, such as amputation of the female breast, the removal of tumors, the excision of joints, etc It is within bounds to say that torsion has been resorted to at this Hospital in thousands of cases without any mishap We have had no case of secondary hemorrhage which could fairly be attributed to the method of controlling the hemorrhage not only at the Western Pennsylvania Hospital, but in all of the hospitals in Pittsburg and the surrounding towns Torsion is the method most frequently resorted to for the arrest of hemorrhage Our surgeons, as a rule, have more confidence in it than in the ligature

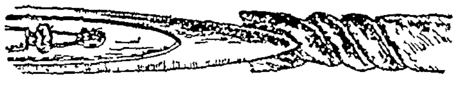

Fig 2 Free Torsion

The following letter from Dr J J Buchanan, the accomplished surgeon at Mercy Hospital, the second largest hospital in Pittsburg, bears out the truth of this statement

August 30, 1893

Dear Doctor Murdoch —In reply to your query concerning my experience with torsion as a means of controlling hemorrhage, pemit me to say that I have used it constantly, though not exclusively, for twelve years for arteries of all sizes up to, and including the femoral, and have never known a hemorrhage to follow its employment My colleague, Dr R W Stewart, and myself, make frequent use of it in the surgical service of Mercy Hospital, both for arteries and the larger veins, and feel no anxiety concerning hemorrhage in our cases Yours very truly,

J J Buchanan

So, also, listen to what Dr W T Huston of the Altoona General Hospital, says

We find that torsion is just as safe as ligation, and gives nature a better chance for repair, for she has no foreign body to contend with as in ligation At this Hospital I can safely say that there has not been one-half dozen ligatures in amputations during the last eighteen months, and we are having excellent results from the torsion of vessels Dur-

> ing the above-mentioned time there have been over fifty major amputations performed in which torsion was used for the control of hemorrhage In all of these cases the patients never lost any blood from twisted arteries—not even from the femoral artery We can, therefore, safely recommend torsion as an excellent means of controlling hemorrhage, and now we resort to torsion altogether, as it has given the most gratifying results in the control of hemorrhage

Commendations like the above could be secured from every hospital in Western Pennsylvania

The advantages of torsion as compared with ligation are

1 The greater facility with which it can be applied

I am fully aware that this proposition is disputed, but to those who are familiar with both methods there can be no doubt that torsion is the easier of the two For the ligation of an artery an assistant is required to seize the vessel and draw it out while the ligature is applied For torsion, the surgeon requires no assistant The vessel must be seized by the forceps in either case In torsion it only requires three or four turns of the forceps to complete the process, which can be accomplished in as many seconds When a ligature is applied, let the operator be ever so skillful, the thread may break or slip off the vessel, but if neither of these accidents occur the process can not be accomplished in anything like the same time

2 Torsion is a safer method, being less liable to be followed by secondary hemorrhage

This proposition has been absolutely proven by the experience in the use of torsion at Guy's Hospital, London, and I have now given additional proof by the experience given in this paper

3 Healing is facilitated because the wound is free from any irritating or foreign body

This proposition is so plain that it should not require an argument It was true before the antiseptic treatment of wounds had come into such general use, but is doubly so now The catgut ligature is, no doubt, a safer ligature than the silk, for it does not require an ulcerative process for its discharge, and when this ligature has been made thoroughly antiseptic it is, no doubt, the best But a ligature rendered thoroughly antiseptic is not always at hand, and those surgeons who have had the most experience with the antiseptic treatment of wounds will, I think, be the first to admit that, in spite of their most careful attention, septic germs are often introduced into the wounds by means of the ligature Even after every precaution in preparation and preservation, the handling of a ligature in its application is a frequent source of infection But there are other objections to its use The catgut ligature may dissolve before the artery has become closed by the natural hemostatic process, or it may unbind Both of these accidents have been the frequent cause of secondary hemorrhage

Being a frequent visitor at the principal metropolitan hospitals both in our own country and in Europe, I am familiar with the practice of our most skillful surgeons It is exceedingly annoying for me to witness a thread break or slip off an artery, which often happens in the effort to tie it, when I know that the vessel could be so easily twisted while it was in the grasp of the forceps When I have asked many of our distinguished surgeons why they do not resort to the torsion, the reply is always the same *we are afraid to trust it*

This answer might have been given with equal force by Richard Wiseman in the seventeenth century, had he been asked why he did not resort to the ligature instead of the hot iron

In a matter so important as the arrest of arterial hemorrhage, it is proper that surgeons should be conservative, but there is such a thing as pushing conservatism too far In the torsion of arteries I claim we have an improvement upon ligation, its claims for recognition rest upon physiologic arguments which can not be shaken, and its reliability as a hemostatic has been proven by abundant experience

CLINICAL NOTES

A CASE OF GENERAL PERITONITIS CAUSED BY AN ENTEROLITH

WITH A NECROPSY

BY E GRISWOLD, M D

SHARON PA

J W , a strong, well built man weighing about one hundred and eighty pounds and 35 years old, had la grippe in the winter of 1891 He had been troubled for several years before with piles, but was seldom disabled entirely by them By occupation he was a heater in a rolling mill He never seemed to recover fully from the influenza, was troubled with frequent attacks of griping pains in the abdomen, and seldom had a good appetite Later, these attacks sometimes became so severe, while at his work, that he was obliged to leave his furnace and lie down for a while From this time onward he was obliged to employ a helper who could attend to his furnace during these attacks Not long afterward he began to suffer severe griping and tenesmus at his stools These distressing symptoms increased until they became so severe that he was afraid to be alone at stools, and was in the habit of having his wife or some one else with him His stools were not abnormally frequent, nor did the pains connected with them seem to be modified by the condition of his piles The pains centered, and radiated from, a point just below the umbilicus, and often affected the bladder Notwithstanding the severity of his sufferings, at these times he would take a few minutes for reaction and rest, and then go to his work He continued to do this until the conflagration which ended his life came

On Monday morning, Aug 6, 1893, about four o'clock, I saw him with his attending physician, Dr J H Reed, and learned that he had been attacked with chills and violent abdominal pains about 7 A M on the day before Dr Reed did not see him until 3 P M , when he found his suffering was intense, the pain centering largely near and below the umbilicus, followed toward the next morning, at the time of my visit, with pains down the right spermatic cord and retraction of the testicle, suggesting the possible presence of renal calculi The temperature was 102 degrees, pulse 120, anorexia and nausea The bowels had been loose the day before the attack A careful examination led to the conclusion that there was general peritonitis There was tumescence, tympanites, tenderness and partial rigidity of the abdominal muscles, with dorsal decubitus The history of the case did not point to appendicitis, typhlitis or cecitis Treatment, alterative doses of calomel, with opium *pro re nata* and external applications of heat The next day the pain, fever and nausea were slightly diminished, but the pulse was more frequent and weaker There was progressive failure of the vital forces which, with a diminution of pain and increased frequency and weakness of the pulse, continued until death, which took place on Thursday at 2 P M, a little more than four days from the attack The bowels were slightly moved by enemata on the third day

Necropsy—An incision extending from the xiphoid cartilage to the symphysis pubis, revealed peritonitis involving all in sight The vessels of the omentum were ingested so as to produce deep discoloration, and the entire visible peritoneum was involved There were but trifling adhesions of the intestinal coils or of the omental folds, and this organ covered the intestines in its normal way There was a small quantity of pus in the dorsal grooves each side of the spine, behind the intestines and mesentery Upon searching for the caput coli and appendix it was found that there was no evidence of further inflammation about the cecum or any part of the colon or mesocolon than at other parts There was simply peritonitis, no adhesions, no effusions, no infiltrations, no abscess On raising the ileum from its dependent position, the cecal end of the appendix was brought into view It was of normal size and less discolored than the surrounding peritoneum It was attached to the anterior inner aspect of the caput coli and took a direction toward the median line of the body, with a slight upward trend Following it with the fingers, it was soon seen to show signs of inflammation and to be attached to the ileum, which was here much thickened and discolored On loosening it from its attachment to the ileum, its end was found to be bulbous in shape and of the size of a black walnut This bulbous end was also adherent to the abdominal wall, just above the promontory of the sacrum Having loosened it from its attachment, it was found to have been lying on the ureter of that side, and that the portion of the peritoneum covering the psoas magnus, and neighboring areas, was ulcerated and bathed in pus The appendix was cut off close to the cecum and preserved While examining the ulcerated area of the peritoneum and handling the coils of the ileum, a calculus was found Its size was a little less than that of a filbert, its shape spheroidal, its surface irregular but without facets, and of a fawn color, the color much resembling that of biliary calculi It was undoubtedly an enterolith Searching for its place of escape from the intestinal canal, the bulbous end of the appendix was found to have a hole in it of sufficient size for its escape, and a cavity large enough to hold it As the cecal end of the appendix was not enlarged, and there being no evidence of recent irritation or inflammation in that part of it the conclusion seemed to be irresistible that the calculus was an old resident in the distal end, and that the inflammatory process and enlargement of the part containing the calculus had been the cause of the paroxysmal abdominal pains, and of the tenesmus and nauseating symptoms experienced at stool for some time before rupture and the onset of general peritonitis

The literature of appendicitis, its concomitants and sequelæ, has been so copious of late that nothing less than an anomalous case would seem to invite a report But the frequency of cases of peritonitis and appendicitis in my practice of late, has led me to think that the light should be turned on whenever practicable On making the diagnosis in this case, recovery was thought possible, though not probable There was no satisfactory evidence that the case was caused by appendicitis, the malposition and adhesion of the appendix being of impossible determination A celiotomy not later than the first day might have saved the patient if the calculus had been found and removed, but the finding and removal would have been more a matter of accident than of operative skill The only symptoms of calculus, as already stated, pointed to the kidney I regard this case as anomalous in the following particulars

1 The presence of a calculus in the distal end of the appendix, adhesions to the ileum and ureter with a nearly normal condition of the cecal end

2 The symptoms of renal calculus were caused, no doubt, by the adhesion of the sacculated or bulbous end of the appendix to the peritoneum over the track of the ureter, as well as the inflamed and ulcerated condition of that membrane

AN IDIOSYNCRASY

BY JAMES HARVEY RAYMOND, M D

CHICAGO

"A peculiarity of constitution in which one person is affected by an agent, which in numerous others would produce no effect"

It is not an uncommon occurrence in the practice of a physician to meet with a case wherein the judicious administration of a known harmless drug has produced alarming symptoms, and occasionally a case is seen in which unusual and unexpected effects are produced by different foods or even odors This condition is known as "idiosyncrasy," and it is, at present, beyond the power of the physician to point out definitely a pathologic condition that may be considered a true etiologic factor The best hypothesis yet offered is, that it is an exalted *reflex act* I was told by Professor Walter S Haines, of a clergyman in an eastern city, who, being the unhappy possessor of this peculiarity, was forced to request friends with whom he would dine, to allow no raw apples to be put upon the table else he succumb to the ill effect of their odor, which effect was a most distressing illness Professor Haines also mentioned this peculiarity in a near friend who was the victim of the odor of the tuberose

However numerous this class of cases may be, I am sure they are not met with every day, and it is for this reason that I am pleased to bring before the notice of the younger members of the profession a few interesting facts concerning the effects observed in a case following the administration of 5 grains of Dover's powder, the formula of which is

℞ Ipecac gr ss
Pulv opii gr ss
Sacch lac gr 4

Considering the physiologic action of the above we find the opium contains about twenty alkaloids, the most common of which are, morphin, codein, narceina, papaverina, narcotina, meconin, apomorphia, thebain and cryptopia

The action of the crude drug and its various preparations is Analgesic hypnotic, diaphoretic, antispasmodic and narcotic The alkaloids, with the exception of the last two named, thebain and cryptopia, are said to be anti-spasmodic and hypnotic, morphin being the most powerful in its effects Thebain and cryptopia are spasmodic in their action, and in doses larger than gr 1ss may cause convulsions One grain of opium is said to contain from 1-1500 to 1-100 grains of thebain and 1-3000 grains of cryptopia Making due allowance for the anti-spasmodic effects of all the other alkaloids of the drug and other constituents, together with the minute quantity of those alkaloidal substances capable of producing spasms, it is unexpected and, I might say, phenomenal to witness a violent convulsion the outcome of a dose so small in quantity as 5 grains of Dover's powder, which would contain from 1-3000 to 1-200 grains of thebain

I was called to attend a patient suffering with an acute bronchitis, age, 29 years, married and mother of two children, no organic disease of heart or other organs, family history good, past history good, general health good, not pregnant, pulse slightly accelerated, full and regular, temperature 100 I prescribed a saline cathartic and a simple expectorant mixture containing

Ammoniæ carb
Tinct belladonnæ
Syr pruni virginianæ
Syr glycyrrhizæ

I called the next morning and found the patient doing nicely, pulse and temperature normal I ordered a foot bath, and 5 grains of Dover's powder, which was sent for and taken in my presence In less than thirty minutes the patient was taken with a severe pain in the back, the most agonizing gastric pain and coldness of the extremities Tonic contractions of the muscles and total loss of consciousness followed, lasting about ten minutes The convulsions were epileptiform in character with no frothing at the mouth or biting of the tongue Diligent inquiry revealed no history of epilepsy either in herself or family The patient had taken at no time during the day anything of the nature of an irritant, nor could any drug or food be found in the house which afforded suspicion I was greatly relieved when she regained consciousness and asked me if opium had been given her, stating she was always affected in this manner by opiates She informed me that morphin caused most distressing cerebral symptoms, in fact "true delirium tremens," but no bodily pain or convulsions

The practical deduction is, the advantage of taking a most thorough history of each case, and thus avoid the unnecessary and appalling experience that we are apt to meet at any time, if we neglect to inquire as to "idiosyncrasy"

NECROLOGY

Dr Paul of Havana, Ill, December 2

Dr W J Kelsey, of Cassopolis, Mich

Dr W R Berry of Gallatin, Mo, November 29

Dr Paul Hoffman of New York, December 2

Dr Alexander Guy of Oxford, Ohio, November 30, aged 93 years

Dr John E Hing of Alma, Wis, aged 86, died November 20 He was the first physician in the County of Buffalo

Dr Francis Hagaman of Montgomery County, N Y, died December 7 at Amsterdam, aged 74 years He is survived by two daughters

Dr W J B Baird of Seattle, Washington, died November 30, after a short attack of rheumatic fever, complicated by chronic valvular disease of the heart

Dr Samuel Moore Logan, formerly of East Boston, died recently in Riverside, Cal, at the age of 65, Dr Logan was graduated from Harvard Medical School in 1861

Dr William Caswell, a Brooklyn physician, was found dead in his bed December 8, at his home, 986 Hancock Street, in that city Heart disease is believed to have been the cause He was 62 years old

Dr George B Boyd, one of the oldest physicians in Scranton, Pa, was found dead in his bed at his residence He was 65 years of age, and had practiced medicine in Scranton for nearly thirty years

Dr D S Sampsel, Sr, died December 10, at Ashland, Ohio, aged 71 years He had served two terms as Mayor of Ashland and was mentioned for that office next spring He was a leading candidate for Congress in the convention which nominated M D Harter three years ago

Dr N L Luck of Penn Yan, N Y He was one of the prominent physicians of that village and an officer of the Yates County Medical Society The deceased was about 50 years of age, and had resided in Penn Yan over fifteen years He leaves a wife and one son, Loren, who has always lived in Penn Yan

Dr E H Bowman, at his home in Andalusia, Ill, November 30, of pneumonia, after an illness of only a few days He was 77 years old Mr Bowman was the oldest physician in this county, also the oldest member of the Illinois and Iowa Medical Society During the war he was Surgeon of the 27th Illinois Infantry General W A Schmidt's regiment

Dr James M Bowling died November 30 at his residence in Nashville, Tenn Dr Bowling had long been a conspicuous figure in Nashville and was noted for his wealth and keen business sagacity He was born in Adairville, Ky, seventy-seven years ago, where he married Miss Lucy E Snadon, a lady of wealth and culture Dr Bowling was a practicing physician for many years, but retired some years since He leaves a wife, but no children

Dr Roswell G Bogue died in Chicago, December 8, at his home, No 5 Washington Place Dr Bogue was born May 3 1832, in Louisville, St Lawrence County, New York, the son of Warren S and Sallie Underwood Bogue His education was obtained in the district schools and at Castleton Academy, Castleton, Vt His early years outside of school were spent on the farm and in school teaching up to the time when he determined to follow the profession of medicine Dr Bogue studied medicine with Dr Harmon Gay at Columbus, Ohio and graduated from the College of Physicians and Surgeons in New York City in the winter of 1856 57 He came to Chicago in the early spring of 1857 and practiced medicine continually until he was disabled by total blindness in 1888 Dr Bogue was appointed Surgeon of the 19th Regiment, Illinois Volunteers, in August, 1861, and continued in the service in the Army of the Cumberland until the regiment was mustered out near the close of the war He participated in the battles of Stone River and Chickamauga and the Atlanta campaign Dr Bogue helped to organize the Cook County Hospital, and for thirteen years was one of the attending surgeons He was the first Professor of Surgery in the Woman's College He was also the attending surgeon in the Hospital for Women and Children during the years following its organization, and was Consulting Surgeon at the time of his death He was also Consulting Surgeon of the Presbyterian Hospital and St Joseph's Hospital Dr Bogue leaves a widow and two daughters, Mrs Dr Hough and Miss Lucy Bogue

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:
PER ANNUM, IN ADVANCE $5.00
SINGLE COPIES 10 CENTS.
Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO. 68 WABASH AVE., CHICAGO, ILLINOIS.
F. J. REBMAN, LONDON AGENT, 11 Adam Street, STRAND, LONDON.
W. H. LOWDERMILK & CO., WASHINGTON AGENTS.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Richard J. Dunglison, Lock Box 1274, Philadelphia, Pa., sending him a certificate or statement that he is in good standing in his own Society, signed by the President and Secretary of said Society, with five dollars for annual dues and subscription for THE JOURNAL. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership. On receipt of the above amount the weekly JOURNAL of the Association will be forwarded regularly.

All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

SATURDAY, DECEMBER 16, 1893.

GRATUITOUS VACCINATIONS BY BOARDS OF HEALTH.

The newly elected President of the New York County Medical Society, DR. SENECA D. POWELL, in his inaugural address takes occasion to find fault with the city sanitary authorities for the too liberal and indiscriminate proffers of vaccination made to people who are abundantly able to employ practitioners—their own family doctor for example—to do the vaccination. He does not censure the special corps of vaccinators so much as the Board that employs them. The subordinate officers simply obey orders and use the various aggregations of unprotected persons whom they have found in large dry-goods stores, and the like, to swell their reports of a large number of proffers of vaccination, and a large number of operations performed. The vaccinating staff can not with justice be charged with any other fault than that of over-zeal, but the effect upon the opportunities of the family physician are curtailed in consequence of this zeal of duty. This of necessity gives ground for complaint. DR. POWELL does not complain of the zealous work that may be done in the crowded tenement houses, lodging houses, and in the poorer localities, but when free vaccination is furnished in the offices of rich corporations and in the commercial exchanges, DR. POWELL asserts that there has been unjust interference with the province of the profession. It is tantamount to an abuse of office power and opportunity, and right minded medical men, if in official control of the Board of Health, should see to it that the subordinates should not do too much free work. Few reputable physicians consent to do work for rich corporations without an adequate recompense and there is no good reason why the employes of our Boards of Health should be put in a position where they may feel compelled to render unpaid services. DR. POWELL held up as a bright and shining example, the corporation lawyers of rich companies, who he says, "never belittle their professional standing by charging any other than the largest regular fee." We are not sure that DR. POWELL is correct in his premise, unless he hedges himself behind a very strong definition of the words, "reputable lawyers." It may be that he is arguing in a circle—the *ignoratio elenchi.* We have met with lawyers that departed somewhat from the full fee bill rather than lose a rich corporation. However that may be, we believe that the notice taken of this subject in a bold way, will effect a change for the better in some official quarters.

If there is danger that the vaccination will be done inefficiently, or not at all, let the Boards continue to vaccinate rich and poor alike, but let them charge those able to pay, and let the sum thus created be deposited in the public treasury to the credit of the Board.

AUTHORITY WHICH CAN NOT BE CONFERRED UPON BOARDS OF HEALTH.

No law or ordinance can be valid which by its terms authorizes a board of health to grant one person a license, and refuse another, under the same circumstances. For example: an ordinance is void which is intended to confer upon a board of health, or upon the board of health and common council of a city, the undefined power of determining by whom, in what location, and as to the character of the building in which the business of tallow chandleries, soap factories, glue factories, slaughter houses, magazines, tanneries, or other hazardous trades or business may be conducted. If it be conceded that power exists to declare a tannery, or any other business, a nuisance, and to provide for its summary abatement, or if it be conceded that such business is a nuisance *per se*, the power to permit such business by express license ought not to and can not exist. But if such business, by reason of its location, the character of the building in which it is conducted, or the manner in which it is conducted may become a nuisance, the most that can be claimed by a city is the power to regulate or to abate such business.

The Supreme Court of Indiana so deciding, Nov. 2, 1893, in the case of the City of Plymouth v. Schultheis, finds a precedent in a former case in which it decided against the validity of an ordinance requiring that hospitals should be conducted only upon permit, to be secured upon notice and application to the common council and board of aldermen. It was apparent, it said, in that case, that under the ordinance, if valid, the common council and board of aldermen had the power to grant or refuse the license in any given case at their mere pleasure, and that no one could conduct or maintain a hospital within the city, however harmless or beneficial it might be, except by their consent No law could be valid which by its terms would authorize the passage of such an ordinance What the Legislature can not do directly in this respect it can not authorize a municipal corporation to do

THE DAVID LIVINGSTONE MEDICAL COLLEGE IN LONDON

DR HARFORD BATTERSBY, formerly a medical missionary in the British dependencies along the River Niger, has become the principal of a new medical school in London The object of this school is to furnish at the lowest possible cost, the training that will be most useful to intending missionaries, very few of whom are able to spare the years of study and waiting that are essential to the regular English school and qualifications As a large number of the missionaries sent out from British countries are destined to some tropical station, it is a matter of the first importance that those persons should be instructed as to the hygiene and principal maladies of hot climates A little knowledge of surgery is also considered important, not only as regards the welfare of the missionary who may perchance be located hundreds of miles distant from any surgeon, but also as to the poor heathen On this latter point, it may be said that, taking parts of Central Africa for example, wars, witchcraft and slavery, famine and a long list of violent causes spare neither the cradle nor the grave, it has been stated that it is the exception, rather than the rule, for the natives of that part of the world to die a natural death Scars, maimed limbs and the loss of vision are seen everywhere Under circumstances such as these, a little knowledge of surgery—being better than no knowledge at all—is not a dangerous thing, as the adage has it The college has the free services of a corps of able teachers, and the missionaries will get their clinical experiences by spending a part of their time in the God-forsaken slums of East London

THE ASSOCIATION

Let every medical man whose eye may glance at this column, ask himself whether or not he would like to see the ASSOCIATION so strong in numbers that its voice would be authoritative

Let him reflect that with a great membership, would come the financial ability to purchase articles, to increase the number of pages, to illustrate articles better, to have better typographical work, to have more machinery, in a few words, to have a journal of the highest class, without increasing the cost to individual members

Let him consider that a large membership will give means of encouragement, by prizes or otherwise, to original investigators That it can influence meritorious legislation, and retard or stop the passage of bad measures Having thus reasoned, let him ask how he can personally lend his aid toward the accomplishment of these ends

Let him sink personal feeling or disappointment, his own friends may be in command next year, if they are out now Let him use his personal influence to induce every worthy physician of his acquaintance to become a member of the ASSOCIATION, or a subscriber to the JOURNAL His duty to the ASSOCIATION will then have been accomplished Let us have no stopping place until our membership surpasses any other

Are there wrongs in the ASSOCIATION? Correct them by appearing in your place when the ASSOCIATION meets, or write your views to your JOURNAL for publication In our ASSOCIATION the majority govern, if your views are correct, you can always have an intelligent support in the ASSOCIATION

Help your JOURNAL property, of which you are part owner, by giving it all the influence you can wield in its favor To ask a man to help build up his own property is surely not asking him too much

Let us start the new year with a great rush, every new subscriber to your JOURNAL makes it easier to obtain paying advertisements, and these in turn add to the value of your property

Write for your JOURNAL, for two years try to increase the membership by individual effort, each within his own circle, and the great work of organization will be over

THE RICHARDSON MEMORIAL ADDITION TO TULANE UNIVERSITY

The dedication of the new Medical College building of the Tulane University took place November 4

After a prayer by Archbishop Janssens, Judge Chas E Fenner, President of the Board of Administrators of the Tulane Educational Fund, then formally presented the building to Col William Preston Johnston, President of Tulane University

His address was as follows

The brief and modest inscription which attracts the attention of all who enter this structure informs them in simple words that "This building dedicated to medical science under the auspices of the Medical Department of Tulane University of Louisiana, is erected by Ida A Slocomb in memory of her husband, Dr Tobias Gibson Richardson, Professor of Anatomy 1858-1872, Professor of Surgery 1872-1889, Dean of the Medical Faculty of 1865-1885" It is thus recorded that Dr Richardson devoted thirty-one years of his life to active service as a Professor in the Medical Faculty, during twenty of which he served in the responsible office of Dean, the Executive and President of the Faculty

It may be added that when Paul Tulane consummated his noble design for the creation of the great University in this city which now bears his name he selected Dr Richardson as one of the original administrators of his noble trust His services to the cause of medical education which had consumed the best years of his life, while losing none of their devotion to that cause, thus formed a broader field in the task of organizing a University embracing, not only medicine, but the whole range of the liberal arts and sciences Into this task he threw the whole enthusiasm of his nature His wise counsels, educational experience and persistent energy were given without stint to the organization and development of the University in all its branches, and whether you stand in these halls specially devoted to medical science or in those devoted to any other department of the University, you may still justly say of him, "Si monumentum quæris, circumspice!"

I am not expected on this occasion to deliver a formal eulogy on Dr Richardson That grateful duty has been already performed by abler hands than mine The administrators of Tulane education fund, the Faculty of the University, the Faculty of the Medical Department, the session of the church of which he was an elder, the various medical and educational societies of this State and other learned bodies, have signified their appreciation of his life and character in feeling and eloquent resolutions, which voice sentiments common to the whole people among whom his noble and beneficent life was passed The last public commencement of the Medical Department was appropriately dedicated to the commemoration of the life and services of this great and good man, and all remember the eloquent and touching tributes which were paid on that occasion by the distinguished Dean of the Medical Faculty, who had been his colleague for so many years and his intimate friend, and by our eminent fellow-administrator, Dr Palmer, whose matchless oratory derives added force from the deep affection and veneration with which he is regarded by all classes of his fellow-citizens

On the 9th day of May, 1891, a letter was received from Mrs Ida A Richardson, addressed to "Hon R L Gibson, President of the Administrators of the Tulane Education Fund," and saying in brief terms, "If the administrators will furnish a suitable site for a medical college I will contribute $100,000 toward the erection of the building, to be paid from time to time as the work progresses" This letter was the consummation of a purpose which had for a considerable time been germinating in the mind of Mrs Richardson with the full knowledge and sanction of her husband It was designed by her as a monument and memorial of him, and was approved by him as the form in which her wifely devotion might best honor him Although he did not live to witness the consummation of the work which we this day celebrate, he lived long enough to see it fairly begun and to experience the consolation afforded by the certainty of its completion

The special committee appointed by the Board of Administrators selected as special agent one of its members, Dr Edmond Souchon, who, with the approval of the Tulane committee and of Mrs Richardson, was intrusted with the responsible duty of designing the floor plans and the interior arrangements of the proposed building Dr Souchon possessed rare qualifications for this duty, and while he acknowledges the invaluable advice and assistance which he received in every stage of the work from the able and distinguished Dean of the Medical Faculty, all agree that to him more than to any other is due the credit for the admirable floor plans and commodious interior arrangements which distinguish this structure, and that debt to Dr Souchon has been acknowledged by the special inscription in his honor placed in the vestibule These plans having been approved by the Medical Faculty and the Tulane committee, Messrs Sully and Toledano, the eminent architects, were employed to embody them in architectural form and to prepare specifications, invite contracts and superintend the construction of the building The work was prosecuted with all possible energy under the energetic supervision of our building committee, with the avowed purpose of having the building completed in readiness to be occupied by the Medical Department for the session of 1893–94 That purpose has been successfully accomplished

The death of Dr Richardson enlarged the scope of the original bounty of Mrs Richardson, who then regarding it as strictly a monument to her husband, seems to have determined that not only the cost of the building, but the whole cost of completing the removal, furnishing and equipment should be at her sole expense With this view she has given the administrators the considerable additional sums which have been necessary to accomplish these important purposes And to day this completed building, with all its new furniture and equipments, may be said to have been paid for by her, and to stand, free from all debt, as a monument to Dr Richardson erected wholly by his wife

What a monument it is! How the costly sarcophagi, the lofty columns, the proud cenotaphs that adorn our cemeteries sink into insignificance beside it! These link the name of those whom they are designed to honor only with the past This entwines it with the living future, associates it with active persistent forces that continue to operate with expanding energy through succeeding generations, and thus, by ever renewing benefactions, vitalize and give a common immortality to the name of him whose noble life inspired the purpose, and of her whose generous love executed it

In behalf of the administrators of the Tulane education fund, I desire to express their profound appreciation of the wisdom, energy and economy with which this important work has been performed The opinions of those most competent to judge, concur that this building, with its equipments and appliances, in commodiousness and in complete adaptation to the complex requirements and needs of the most advanced medical and pharmaceutical instruction, compares favorably with those of any medical college in America, and that the result has been achieved at a cost far less than has been expended by other institutions in establishing accommodations by no means superior With these extraordinary advantages, with the incomparable clinical opportunities afforded by the great Charity Hospital, with an advanced and advancing standard of proficiency, and with a faculty of distinction, experience and approved ability, it is not difficult to foretell a brilliant future for this medical department which will reflect honor upon the University, of which it is a branch, and will vindicate the wisdom of the generous donor, and will hand down the memory of Dr Richardson and his devoted wife to the blessings of untold generations

And now, President Johnson, to you as President of the Tulane University of Louisiana, I am instructed by the administrators of the Tulane education fund to consign the care and custody of this building and its contents, to be devoted to the purposes for which it is designed, confident that under your wise supervision, with the cooperation of the Dean and Faculty of the Medical Department it will be so administered as to satisfy the wishes of the donor, to honor the memory of Dr Richardson, to be a glory to the University, and to extend to this and coming generations the advantages of the best and highest medical education

In accepting the property on behalf of the University, the President said

Mr President —In your official capacity as President of the administrators of the Tulane educational fund, and on their behalf, you have delivered to me, as President of Tulane University, these buildings and grounds This is in pursuance of your agreement with the State to build up a great University in the city of New Orleans The Medical Department for whose use this splendid structure is designed, is by many decades the oldest branch of the University, and as its usefulness has extended to every section of the South, so has its fame spread as the years went by

At a providential moment, when its requirements pressed heavily on its resources and expansion seemed a necessity of self-preservation, a beneficent hand was stretched forth to its aid, and in a brief space of time more than we dreamed of has been accomplished

The gracious benefactress, your distinguished Board, and a friendly public to whom its worth is well known, all feel that in the hands of our Medical Faculty everything will be done for medical science and education that their resources will permit The character of that Faculty as men, even more than their distinction as scientists, is a guarantee that this sacred trust will be employed

It is therefore with pleasure and with a sense of profound gratitude to her from whom this gift came, and to the Spirit of Good who inspired it, that I commit this building and equipment to the custody of the Dean and Faculty of the Medical Department of Tulane University, for the uses for which it was designed

In accepting the custody of the new college, as Dean of the Medical Faculty, Prof S E Chaillé, M D said

Mr President —This great building and its spacious grounds and their valuable contents, the whole exceptionally well adapted to the needs of medical education, have been transferred through you from the University to the Medical Department, in order that its Faculty may occupy and utilize them The Medical Faculty gratefully accepts this transfer, with full realization that the greater the gift the greater the obligation, and with firm determination that the responsibility, however great, shall be amply discharged, so discharged that the Medical Department of the Tulane University of Louisiana shall continue to be even more conspicuously than in the past the most famous and the most popular, as it is also the oldest medical college in the great Southwest

The very warmest thanks are due to our colleague, Prof Edmund Souchon, the agent unanimously chosen by the

Faculty to supervise not only the construction of the building, but also the supplying it with its contents, in fine, the agent to do the many and important things requisite best to adapt our building to the purposes of medical education He has discharged his very onerous duties, burdened with endless and harassing details, with marked ability and conspicuous fidelity, and these virtues have yielded the very best results, because invigorated with the ceaseless and the enthusiastic zeal which springs only from labors of love The Dean of the Medical Faculty gladly avails himself of this public opportunity to proclaim that the burden taken from his shoulders by his colleague was heavier than the Dean felt himself able to bear, and that his good friend, Prof Souchon, discharged all the duties imposed on him better than the Dean himself could have done

But of the memories of the living which most endear this structure to the Medical Faculty none are as grateful, none are as loving as those due to the fact that our building came from the generous heart of a loving wife, from the gracious hand of a gentle woman of New Orleans, than whom there is not one better deserves to be and is more honored and more beloved

Having briefly alluded to some of the grateful and loving memories already attached to our new building, still briefer allusion will be made to some of the hopes entertained by the Medical Faculty But before giving expression to these I can not resist the temptation to state that the Faculty does not indulge any hope that our college, though its comparative superiorities are very great, is destined soon to become the ideal medical college which many dreamers idly anticipate and which is to have every possible need amply supplied and every professor endowed with the wisdom of Solomon and the perfection of saints Were there no other obstacles to the realization of this vain hope, the very highest authority on the subject estimates that the ideal medical college would require not less than $3,000,000 instead of one-fifteenth part of that amount invested in our college As well as, and probably better than others, the members of the Medical Faculty realize the lack in this, as in every college, whether medical or not, of much that is desirable, and are in no need of criticisms, though these are often proffered gratuitously—if these criticisms be not destitute of practical suggestion which the Faculty will always highly prize as the ways and means by which whatever that is lacking can be supplied

None the less, the greater resources now placed in the hands of the Medical Faculty, the past history of this Faculty and the recent prosperity of our college all unite to justify our very sanguine hopes The hope that this college will become illustrious for the ability fidelity, learning and eloquence of its Faculty, the hope that its students will be noted for exemplary conduct, noted for their zeal in utilizing the exceptional advantages here given them, noted for their devotion to this college, "the dear mother" destined to give them professional truth and noted for the renown to be bestowed upon their college by their own honorable and prosperous careers

The hope is also devoutly cherished that benefits so great will be bestowed on medical education, involving vitally as it does the highest welfare of the people, that our college will become an object of pride and affection, not only to the medical profession, but also to the people and not only to the people of New Orleans, but also to the people of every State of our dearest South and of all the States of our beloved country

Prof Edmund Souchon was then introduced by Dr Chaillé He gave a full and accurate description of the building and its contents Dr Souchon was warmly applauded as he closed his address

The ceremonies were then brought to a close by Rev Dr B M Palmer pronouncing the benediction

The building is composed of three connected buildings The center one contains principally the lecture room, having over it the amphitheater and two wings which contain the laboratories, dissecting rooms and museum

The basement is well lighted, and contains a study room for students, a recitation room, and an embalming room

The microscopical, chemical, pathological, bacteriological and pharmaceutical laboratories are supplied with the latest improvements, and form one of the most complete medical institutions in this country

SOCIETY NEWS

Medical and Chirurgical State Faculty of Maryland

Semi-Annual Meeting held at Annapolis, Md, Nov 22 23, 1893.

Dr George H Rohe, President in the chair, Dr William B Canfield, Secretary pro tem.

First Day—Tuesday, November 22

Dr Abram Claude of Annapolis, delivered the

ADDRESS OF WELCOME,

In which he heartily greeted the Society and bade them welcome in the name of the Anne Arundel County Medical Society

Dr George H Rohe then delivered the

PRESIDENT'S ADDRESS,

In which he thanked Dr Claude and the medical profession of Anne Arundel County, and referred to the growth of the Society He suggested some very important and practical changes which were acted on in the business meeting of the Society

Dr Walter B Platt then read a paper entitled

A CASE OF LAMINECTOMY, OPERATION ELEVEN MONTHS AFTER INJURY TO THE SPINE

Hippocrates, who was such a voluminous writer, does not mention this operation Paul of Ægina, was the first writer, nearly twelve hundred years ago, to notice this operation It was generally fatal in its early days because it was not done with antiseptic precautions Henry Klein, in 1814, was probably the first surgeon to do the operation This patient died and the surgeon was censured Many others after him reported fatal cases It makes a difference whether the operation is done at once, immediately after the injury has been received or some time after the injury Fractured laminæ are generally present with the fractured spine The laminæ become displaced and press on the cord. The operation should never be done to relieve the paralysis of Pott's disease until all other means have been tried and the patient is growing worse Statistics show that over 80 per cent of such cases recover without operation In perfectly hopeless cases the operation is advised His patient had first slipped on the stairs, and two weeks later he fell from a car, and one week after that he suddenly complained of extreme pain in the back and went to bed There was found a curvature of the spine at the point of pain, a below this there was complete paraplegia with loss of sensation Bed sores appeared, but there was no discharge of pus from any place except from the bed sores The operation had been done about two weeks ago, and two parallel incisions were made to the inner side of the transverse processes and were joined by a transverse incision, making an H-shaped appearance The hemorrhage was checked by pressure and the laminæ of the fifth, sixth and seventh vertebræ were cut off The flap was turned down for four inches and the dura was exposed, it looked healthy The flap was replaced and no arteries were tied and the operation lasted one hour and twenty minutes There was copious venous hemorrhage He is at present writing, better, but still has skin anesthesia, there is no improvement in motion In such operations the improvement in sensation comes first The patient can lie on either side without fatigue, and no longer has night sweats as he had at first, although the most careful examination failed to show at any time any signs of tuberculosis of the lungs Dr Platt also showed a specimen from a cadaver to illustrate his paper

In the discussion which followed, Dr Randolph Winslow said he had been considering the propriety of doing this operation, and he related several appropriate cases from his own practice, cases which from falls and other accidents had fractured some part of the spinal column, and in whom an operation had not been successful In one case there was complete paralysis below the eighth nerve, and in another case there was paralysis from the clavicles down, and in neither case did an operation do any good, and he did not put much belief in laminectomy

Dr George J Preston said that in the last few years he had seen several such cases, and in some he had recommended an operation with bad results He does not know which cases should be operated on If the cord is cut entirely across, an operation will do no good The spinal cord in human beings will not unite to any extent, as it does in dogs after section, and as the nerves do If an operation is to be done it should be done at once, for if we wait until secondary degeneration has set in it will do little good The operation should be done a few days after shock, hemorrhage and effusion have passed away, then operate as we do in other cases There is not so much injury done by the pieces of bone as by effusion and tissue formation around the cord

Dr Platt, in closing, said that the prognosis of this injury and of the operation depended on what part of the spinal column was injured In general, thé nearer the head the less chance there was of success We should always consider laminectomy as we do trephining of the skull, in fact, laminectomy is nothing more than trephining and the mere operation is not of itself dangerous, it is only the injury that is to be feared If the body of the vertebra is fractured we can expect little Hippocrates gives good advice on this point

Dr J H Branham then read a paper entitled

TUMORS OF THE SUPERIOR MAXILLA,

In which he gave an extended account of his method of operating in such cases, and exhibited specimens illustrating the subject

Dr Randolph Winslow read a paper on

AMPUTATIONS,

In which he said that since the introduction of rapid transit in our large cities, surgery of all kinds had increased, and particularly was there greater necessity for amputations than before He considered the condition of the blood supply to the injured parts the most important condition for a successful result in such operations He then related several cases and mentioned complications as tetanus

Dr J M T Finney said he would like to emphasize a remark of his late instructor, Dr John Homans of Harvard, who was Professor of Surgery there He said that any fool could amputate a leg but that it took a surgeon to save it Dr Finney thinks there are other methods than amputation and Thiersch's skin grafting is one There seems to be a tendency to save limbs entirely useless for a future amputation This may be a good thing, because a stump made from a later amputation in which the parts are in good condition is a much better stump than the one made at the time of the injury All these things must be taken into consideration There is no question so important as whether we should amputate the limb or not Another point Dr Winslow had made was the time of the operation He had recommended waiting until reaction from shock had set in The majority of cases are much better operated on at once unless the shock is very severe Dr Winslow referred also to the question of tetanus, it does occur in a certain number of cases, but the bacillus tetani is anerobic and grows best where the air does not have access to it In a bullet wound, or punctured wound from a toy pistol or rusty nail, there is danger of tetanus, and as most earth so often contains this bacillus, it is carried in with the object wounding and stays in the wound This can be guarded against by laying such a wound open freely, the more freely the better

Dr Winslow having been called from the hall, was able to make no reply to these remarks

Dr William T Cathell then read a paper called

A STUDY OF THE EFFECTS OF TOBACCO ON THE THROAT AND NOSE

He divided those who used tobacco into three classes, those that tobacco did not injure at all, those that it injured to a slight degree and those to whom it was a poison The oil and nicotine are the poisonous ingredients He condemned especially the short pipe and the stump He thought that the pipe might be the exciting cause of cancer of the tongue and lips, and tobacco might cause polypi He painted a very sad and painful picture of the evil results of using this baneful weed, and especially considered it injurious to the young and growing

Dr C Birnie, Taneytown, Md, did not think that physicians could dwell too much or too strongly on the harm which tobacco does to growing boys, but he thought that the rest of Dr Cathell's indictment was altogether too severe and not supported by facts and sufficient proof of his statements For his part he did not believe that tobacco had ever caused cancer or polypi The very common remedy among people in the country is tobacco The wet tobacco leaves or a wet quid from a friendly mouth is put on a fresh wound and never removed until it heals and recovery is perfect He has seen this often, and while he does not advocate it he knows that the wound gets well, whether the tobacco does it or not it is not easy to say, but the wound certainly never gets worse from it It may possibly be a case of post hoc Chronic conditions of the nose and throat are as common in the country among women as among men, and women do not use tobacco as men do

Dr Wm H Welch agreed heartily with what Dr Birnie said, and was glad to hear his remarks after the gloomy picture presented by Dr Cathell There is very little evidence to show that tobacco produces organic or malignant disease The mechanical action of the pipe may cause an epitheliomatus papilloma of the lip but not a cancer He was much interested in Dr Birnie's remarks on the way the people treated wounds in the country by tobacco It had been shown in his laboratory at the Hopkins Hospital that the action of tobacco smoke on bacteria, as the smoke was drawn through the culture tube, was inhibitory There had also been a physician in his laboratory who had always the diplococcus *pneumoniæ* in his mouth, and from whom other workers used to get it for cultures This physician began to chew tobacco and no more cultures could be made from his mouth secretions as the tobacco had killed the organism

Dr Abram Claude of Annapolis, said he had been practicing for fifty-five years, and was now 74 years old, and he had chewed tobacco almost all his life, and his father before him, and he was well He did not advocate its use in the young, but some it injures and others it does not, never mind how much they use it His friend Dr Ridout, had lived to the age of 90, an inveterate chewer He had also ofteen seen cuts and wounds treated with great success with quids of tobacco Dr Cathell had brought forward no proofs of his statements of the injurious effects of tobacco, nor had he ever made any postmortem examinations of the fatal cases

Dr Cathell, in closing, said that the cases of Dr Claude belonged to his first division of cases that were not injured by tobacco He had not said that smoking and chewing could cause cancer or polypi, but that they could be the exciting causes of these troubles

Dr George J Preston then read a paper entitled

SOME FACTS AND SUGGESTIONS CONCERNING THE CARE OF THE INSANE IN MARYLAND

After reviewing what had been done in this State for the care and treatment of the insane, he spoke of the active part which this Society had always taken in all matters affecting the public health Many of the insane, while technically classed as paupers, are really not such any more than are the accident cases in our emergency wards The nature of the disease renders treatment at home impossible, and the duration of the disease makes it impossible for many to pay for treatment during the long course, and more than that, the man is dangerous to the public and must be confined It follows, then, that the State must make better provision for this class of unfortunates than for the pauper class Our advanced civilization demands more scientific and more humane treatment Therefore the State should take care of her insane, not only because it is her duty, but because it is more economical to treat them properly and cure many of them than to have them a continuous burden Therefore the State should assume entire control of all public insane within her borders, the acute and chronic insane should be separated Also there should be at some central point, or in the large cities as at Baltimore, a detention hospital or ward where those becoming suddenly insane, the cranks of all kinds, could be confined until their cases are studied and a proper disposition is made of them The station houses are not proper places for such cases

Dr Henry M Hurd said that the insane should have State care, county care is only an excuse to economize If the State deprives a man of his liberty the State should take care of him as well as possible He does not believe in dividing acute and chronic cases He does not believe that any man knows who is curable and who incurable We should have a detention hospital for the temporary care of the insane, and study these cases there and find out where they belong

Drs E N Brush, R F Gundry, S J Fort, Wm Lee, B D Evans and C Birnie all spoke of the manner of obtaining proper legislation on this point, and its great importance

Dr Wm H Welch said the paper read was a most excellent one He thought whatever was done, the insane should be used for medical educational purposes, and the general practitioner should know something of insanity We should take no step that would throw the material away from Baltimore, and keep it from being used in teaching The provision should not exclude the possibility of using the insane for clinical material

Dr Wm Lee, Secretary of the Maryland Lunacy Commission, then read a paper entitled, "Advancements in the Care of the Insane in Maryland during the Past Eight Years, Insanity in the Colored Race"

As a result of these papers and the discussion, resolutions were passed, and a committee of twenty-five was appointed, to bring the matter in proper shape before the next Legislature

Dr Thomas H Brayshaw of Glen Burnie, Md, then read a paper, 'Is Psychic Research a Benefit to Mankind?"

Dr S J Fort of Ellicott City, Md, read a paper on "Psychical Epilepsy"

Dr H M Hurd said he did not accept his nomenclature, nor did he agree with Dr Fort in his conclusions, it is an unfortunate name for those not having epilepsy

Dr E N Brush said he did not like the name, moral imbecility Children may be educated too much and rest may help them We may educate our imbecile into a criminal as he gets older

Second Day—Wednesday, November 23

Invitations were received to visit the Naval Academy, by Medical Inspector Thomas C Walton, also from the Medical Association of the District of Columbia, which will celebrated its centennial next February Dr T A Ashby was appointed a delegate to represent the Faculty there

Dr Wm H Welch then brought up the report of the National Quarantine Committee of the New York Academy of Medicine, on a Bill to Establish a Bureau of Public Health within the Treasury Department of the United States, and offered a resolution to appoint a committee to further the passage of this bill The bill is very important, and has been prepared with great care and with due regard to the National Government and States' rights The object of this committee is to further the passage of this bill, and cooperate with the committee of the New York Academy of Medicine Resolutions were also passed appointing a committee to act in conjunction with the Medical Examining Board, to secure needed modifications to the Medical Practice Law

Dr B B Browne then read a paper entitled, "Artificial Vesico Vaginal Fistula for Examination and Treatment of Ureteral Diseases"

Dr H A Kelly remarked on the value of this paper, and said that where formerly we relied on touch and feel to explore the bladder, and even to catheterize the ureters, he had now taken up the plan of using the head mirror and throwing so much light into the female bladder through the speculum that every part of the interior of the bladder, as the pharynx under similar circumstances, was visible, and we could see with distinctness the openings of the ureters He showed a series of photographs, demonstrating how easy it was to use the head mirror for this object, and how important it was for the general practitioner to get into the habit of using the newest methods of making examinations

Dr T A Ashby then read a paper on "Sterility Due to Tubal and Ovarian Disease"

Dr J E Michael was much pleased with the paper of Dr Ashby, and thought it emphasized the tendency of these times to save rather than destroy the organs of woman This will be of great service in increasing the population The theory of the fimbriated extremity grasping the ovary during ovulation was he believed an exploded one, although from the nature of things this was not certain He thought that ovulation was rather by a current set up in the ciliated epithelium of the tube, and disease of the tube interfered with the action of this epithelium and ovulation did not take place Ovulation and menstruation were not synchronous, ovulation goes on before menstruation begins at all Many pregnancies occur before the establishment of menstruation

Dr Charles P Noble of Philadelphia, said it was time to recognize that sterility depends more on the ovary and tube than on the vagina and uterus, and if the uterus were more often left alone it would be so much the better Abdominal surgery is much safer than it was, and this is the secret of many operations, it is not that the operator is more anxious to do the operation but that he can dare to do it The combined work of Price, Dudley and Martin had been put down at two pregnancies, as the result of all their operations and it was a question whether these two pregnancies had anything to do with the operations He had little faith that diseased tubes could ever amount to anything We can save an ovary that is partly diseased Some adhesions disappear of themselves and these may be of puerperal peritonitis It was well to use palliative measures of treatment in these cases

Dr H A Kelly said that Dr Ashby struck the right keynote, or to be more classical, "rem acu tetigisti" It is very important that the general practitioner should know how to approach a case of sterility No man should pronounce a woman sterile until he had examined her husband Examine the semen Impermeability of the os uteri is often the cause of sterility and a simple dilatation will effect a cure In some cases he has found small tumors pressing on the tube and presenting an obstacle to the passage of the ovum Dr Ashby, in closing, said the question of the physiology of menstruation was a speculative one in the human being, but we can learn much from comparative anatomy He does not believe in opening the abdomen by way of experiment

Dr H A Kelly reported thirty-nine cases of removal of the uterus, some by the vagina, some by the abdomen, with one death which was not due to the operation but to septic catgut The earlier work had been done by the clamp method, drawing out the tumor, putting on the clamp and leaving it there until the wound had healed Then there was the combined extra- and intra peritoneal methods The abdomen was opened, tumor lifted out vessels tied, stump cauterized to prevent sepsis and then fastened to the lower angle of the wound He thought that the unilobular tumors were more common in women who had borne children He operated for good reasons only His present method was to first make an incision, then to put on ligatures to stop the hemorrhage as he was operating He had noticed that the tumor seemed to take the shape of the pelvic canal when it was situated there There were only four large arterial trunks feeding the tumor and two were reached at once The broad ligament was pulled aside by the fingers He took great care not to get the contents of the uterus and cervix on the stump, and always disinfected the stump with the cautery, or he cut it off and left it cup shaped He put in a few silk ligatures in the stump, cleaned out the abdomen although it should never have a chance to be otherwise than clean, stopped oozing of small veins, cut off ligatures and dropped the stump back into the abdomen, turning the pedicle upside down so that the bladder is exposed to view

Dr Charles P Noble of Philadelphia said that the subject of the operation on fibroid tumors was of great interest just now to gynecologists Formerly it was thought that they were innocent things that were never cured and should be left alone, as it was supposed that they disappeared at the menopause or did no harm This teaching is undergoing revision and it no longer holds The menopause is often put off in such women to the fiftieth or fifty-fifth year and it is very discouraging to tell a woman of thirty that she must drag on for twenty or more years with no help Many do not cease to give trouble, even at the menopause The first five cases he had operated on were of this kind These patients are great sufferers He thought that a tumor that weighed five pounds could be called a large one, a two pound tumor in the pelvis will fill it and he had never seen a fibroid that weighed more than eight pounds In all the operations he had done, where the stump was left in the angle of the wound, hernia had resulted The method of operating has been developed by many surgeons He did not advocate using the ligatures in the cervix, and thought it was unnecessary to put on the ligatures in the vagina, and he does not think there is any use in cupping out the cervix He did not think that we removed enough fibroids Why should we leave a fibroid in to grow large? It is safe surgery to remove it and we should do it

Dr J E Michael thought that gynecologic operations were like other surgical operations and advanced and changed in the same way, and there was no excuse for always keeping in the same rut

Dr H A Kelly closed by saying, that he had been asked once in court as an expert witness, what a large tumor was, and he replied that a tumor was large when it pressed on the parts A tumor that is large in the pelvis may not necessarily be large in the abdomen

Dr Hunter Robb read a paper entitled,

GYNECOLOGIC OPERATIONS OUTSIDE OF HOSPITALS

in which he gave specific and minute directions how to perform an operation outside of hospitals, and what assistance and what else was necessary to success

Dr W S Gardner thought also that operations could be done as well outside of hospitals as in, if care be taken In cases where you have large collections of pus and where much irrigation is needed it is not advisable to operate at home He does not believe that wounds become infected from the atmosphere He does not think it is necessary to take our sterilizer with us, as the sterilization can be done at home before starting, and if the instruments, sponges, etc, be kept in the cotton in which they were sterilized they will be clean It was just as well to have plenty of sterilized water at hand but it was rarely well to use it

Dr Julius Friedenwald read a paper on "Atony of the Stomach"

Dr Milton D Norris read a paper entitled, "Subcutaneous Infusion of a Nutritive Salt Solution in Cases of Refusal or Inability to take Food," in which he reported his experience in feeding cases at Spring Grove Asylum with good results

This paper was discussed by Drs Brush, Evans, Gundry, Branham, Rohe and Fulton

Dr C Birnie then read a paper entitled,

WATER SUPPLY, ISOLATION AND DISINFECTION IN COUNTRY DISTRICTS

in which he showed the carelessness of country people in respect to their drinking water and disposal of their sewage, and the filthy way they arranged their water closets The suggestions in this paper were practical and simple, and his experience was a valuable one

Dr George H Rohe said if he dared to make a comparison he would say that this was the best paper of the session

Dr Canfield said he thought the paper was to be commended for the practical nature and for the simple nature of the suggestions, he thought this was the age of preventive medicine and we needed just such papers as this The paper was further discussed by Drs Hines, Evans and Brush

Dr W T Howard, Jr, read a paper on "Hemorrhagic Septicemia," which was discussed by Dr J Friedenwald

Dr John S Fulton of Saulsbury, Md, exhibited

AN APPARATUS FOR THE ESTIMATION OF UREA

which was superior to any instrument yet shown, and which with a little practice could be used by the general practitioner This was discussed by Drs J Friedenwald, Canfield and Fulton

Dr Edward Anderson of Rockville, Md, read a paper on "Obstruction of the Bowels"

Dr Fred J Dunning of Easton, Md, in his

GLEANINGS FROM A COUNTRY PRACTICE,

reported a supposed case of yellow fever, with the difficulties attached to daring to make such a diagnosis or failing to do it in a crowded community He also reported his first case of abdominal section

His paper was discussed by Drs Canfield, J Friedenwald and Fulton

College of Physicians of Philadelphia

Section on Orthopedic Surgery

Meeting held on November 17, 1893

Dr J B Deaver exhibited a patient showing the result of

SUBCUTANEOUS OSTEOTOMY OF THE NECK OF THE METATARSAL BONE, FOR HALLUX VALGUS

and gave the history of the case

Dr H Augustus Wilson opened the discussion by exhibiting a cast of a similar case in which there was extreme hallux valgus of the right foot, the metatarsal bone being decidedly pushed from the normal position underneath the second biceps It was originally the intention to amputate the toe A bursa was present on the right foot, and this was found to be a segment of the joint, which he had opened thinking it a corn or a bunion The pain was excessive

Dr T G Morton—The cases of this form of toe distortion which have come under my care have generally been accompanied by serious joint disease, so much so, that excision of a wedge including the entire articulation was required I have never performed osteotomy which is at once so simple and efficacious for the modern forms of the malady I believe that in the great majority of cases that the operation as performed on the patient before us, which has been so eminently satisfactory, is all that generally would be required

Dr G G Davis—Dr Deaver speaks of the shape of the shoe as being the cause of the deformity, but I can not fully agree with him In some of these cases there is a marked rheumatic element I do not think it is *always* produced by pressure I can not believe that an ill fitting shoe, alone, in all cases, produces it There is often some rheumatic condition in the neighborhood of the joint

Dr J B Deaver—In answer to Dr Morton, I confess I have not done osteotomy on so pronounced a case as the one referred to, but my deductions from the literature on the subject and from my experience with the operation, are that it would fulfill the indications in the case referred to I have no doubt of its superiority over amputation and that we can promise the patient a good result We all know there is a great objection to amputating the great toe, therefore the more conservative operation is the better one if it can be done We also need to note the absence of adhesions in the joint after osteotomy

In my own case, the condition was the result of a frost bite, but I believe with Dr Davis that a rheumatic element is to be considered In any case where the deformity exists, the sooner it is corrected, the better I do not believe in any of the ordinary appliances, all of them are unsatisfactory, they make the shoe large and unwieldy and simply add to the existing deformity The operation is not attended with any risk We all have operated upon cases of knock knee where there was greater deformity, and made good corrections Dr Wilson's illustration of the prominent head of the metatarsal bone being mistaken for a bunion, only shows how careful the general practitioner should be, and in any case of doubt refer it to an authority

Dr T G Morton brought before the Society a very unusual instance of general bodily deformity, with ankylosis of the spine, upper and lower extremities, etc, in which he asked the attention of the members as to the possibility of any operation affording improvement, and gave the following brief history of the patient

In July last I received a note from Dr Wright of Gipson, Ala, asking for permission to send to the Orthopedic Hospital a case of deformity in an adult which was thought could be improved As it was impossible to obtain an exact description of the case, the patient was allowed to come North, and accordingly started on his journey, first riding fifteen miles in an ox-team to the railroad, then without change to this city He was so deformed that he had no use of his lower extremities and was confined in a sitting posture in a rude, home-made chair which he constantly occupied The following notes of the case were taken by Dr Walker of the Hospital

Family History—Amos C G, age 32, of Gipson, Ala Parents living Father age 55, has had rheumatism from boyhood Mother age 65 years, suffers almost continually with neuralgia Two brothers living, both have had rheumatism

Previous History—Patient was well until ten years old when he had an attack of rheumatism commencing in the right hip joint, the knee joint of the same limb was involved, then the ankle, and later the joints of the left lower extremity, spinal column, and finally both shoulders, elbows wrists, and to a less degree the fingers and toes The extension as above described occupied a period of over three years, during which time he suffered intensely and could be moved only with great difficulty Joints were hot and swollen, fever moderate His limbs were in one position during all this time, though not then ankylosed, he says that he could move but the effort caused him intense pain At the end of three years, 1874, the pain became less acute, gradually lessening until 1885, at which time he says no rheumatic pain remained but the joints were stiff as at the present time

During the years of his first attack (from 1871 to 1874) he spent much of the time in an ordinary chair, leaning upon the arm of the chair which was placed along side of him, this position evidently accounting for the lateral curvature and some of the deformity of the trunk now seen In 1874 he had a chair made of the same pattern as the one now in use, but for a time had to support the greater part of his entire weight by the arm pieces (two pins, one beneath each shoulder joint) because of the pain in the hips and spine if those joints were subjected to any strain This would explain deformity (elevation of shoulders)

This chair was made with a cross piece passing beneath the knees for support Femora found curved at this position In 1886 had another attack of rheumatism affecting principally the shoulder joints and those of the neck Several joints have been affected at different times since then

Present State—Head normal in shape and size, wears a 7⅛ hat, trunk undersized and misshapen, antero posterior and lateral curvature of the spine which is perfectly rigid, legs flexed on thighs, almost in contact, thighs on pelvis and in contact with the abdomen, and pelvis upon the thorax, the anterior superior spinous processes of the ilia being almost in contact with the lower ribs, all the joints of the lower extremities are firmly ankylosed, with the exception of the phalanges

The right arm can be bent at an angle of 45 degrees with the shoulder The left elbow is fairly ankylosed, no pronation or supination The left arm can be brought to a right angle with the trunk at the shoulder, left elbow firmly ankylosed at a right angle, pronation and supination normal, wrist and phalangeal joints normal

Weight, 52½ pounds, measurements, height from top of head to lowest part of body as he sits in chair, 22 inches, right calf, 5⅝ inches, right arm, 5¾ inches, left arm, 4¾ inches, right forearm, 6 inches left forearm, 4¾ inches, appetite fair, digestion well performed, tendency to constipation, heart, liver and lungs normal, urine highly acid, sp gr 1030 excess of urates, no abnormal constituents

I shall be glad for the members of the Society to examine this patient and then to give their views as to the possibility of any good being attained by operative interference From a careful study of this case I feel that little if any improvement can be secured by any operative treatment on account of the inability of the man to use his arms to any extent, the ankylosis of the spine which precludes any movement of the body, and finally the excessive atrophy of the lower extremities, which, even if brought out straight, would not support the weight of the body Probably the best that can be done will be to give him a suitable apparatus to support his arms as an attachment to a proper spinal brace

Dr H Augustus Wilson said—Dr Morton speaks of the possibility of reproducing one of his successful experiences, and, after bringing the legs down, of adjusting artificial limbs It seems to me that osteotomy in this case would be an unwarrantable procedure, even if the legs were brought into good position, the curvature of the spine, the rigid pelvis and the position of the head to one side, would make the result one of disappointment even if osteotomy in itself were successful I am rather of the opinion that a wheel chair would be the best thing for him He has probably sufficient motion of the shoulders and hands to enable him to move a chair about Something similar to the chair he now uses with wheels added, would be a wise arrangement so that he could have more freedom of motion The outdoor life thus induced as well as the movements of the arms in propelling the chair, would be decidedly beneficial In the sitting posture he could adopt some occupation by means of a movable shelf attached to the chair and thus relieve the strain of idleness

Dr Frank Woodbury—Rheumatism in children is not a very rare affection, but this patient presents conditions rarely met with, and is a most interesting case Probably it would be more correct to regard it, not as a case of rheumatism but as an illustration of arthritis deformans in an advanced stage of the disease As the patient is now 32 years of age and has been suffering for twenty years, or more, the long course of the disease would be against any marked benefit arising from an operation, especially as there is only infantile development of the lower extremities Regarding it as chronic arthritis, we recall the fact that in these cases cod liver oil, massage, gymnastics, hot applications, and electricity to improve the muscular tissues, are able to accomplish much good By directing such treatment, especially to the upper extremities, he might gain sufficient range of motion to feed himself or to propel himself in a wheel-chair and get more comfort out of life It must, of course be determined, surgically, whether there are any fibrous adhesions in the elbow or shoulder joints which could be broken up by forcible flexion, but as regards anything more in the way of operation, I think that more radical measures might safely be postponed until the limit of improvement by the treatment just outlined has been attained Certainly a six months' course of medicine would put him in better condition for operation, even if it were determined that such procedure was necessary

Dr G G Davis—What struck me in looking at this case is the fact that the patient appears to be in a moderately healthy condition and would very likely stand operative procedures well It would be a great gain if he could be made to stand upright Failure might arise, of course, from sepsis, etc, but the advantages from straightening the extremities would be so great, and his health appears to be so good, and the danger from osteotomy so small, that I would think some operation might be undertaken His condition could hardly be worse and he might possibly be benefited—to what extent I am unable to say, but it might be worth the attempt

Dr H R Wharton—I would like to ask Dr Morton if he would have any hesitation in giving this man an anesthetic? It seems to me that I should have some anxiety in doing so So far as osteotomy is concerned, certain correction might be made, but I do not really see how the condition of the patient could be much improved I do not think much motion could be obtained I am inclined to think that the judicious course would be to make him comfortable by a mechanical contrivance I have had considerable experience with osteotomies, and the wounds usually do well, but in some conditions of the tissues, sloughing occurs, and the patient is very sick from the operation itself I should be rather inclined not to operate

Dr DeForest Willard—In my judgment it would be doubtful whether the patient would be able to manage artificial limbs, even if his legs were put into good position Necessarily the artificial legs would be heavy, and I doubt whether he would be able to balance himself, since his back and neck are so rigid Osteotomy is an operation simple in itself and not attended with any special danger

I know of a case in this city, not quite so much deformed, as this one, but having its origin in rheumatoid arthritis It did not occur so early in life, but otherwise it is quite similar to this one Nothing could be done for the patient Another is that of a man so much deformed that he has lain in bed for twenty years The disease in him is aroused by any attempt at motion of the joints

Dr J B Deaver—I should hesitate to change the topography of the blood vessels on account of cardiac diathesis Several osteotomies would have to be done, and it is a question in my mind whether any great gain would be secured The bones are particularly small and I question whether they would be able to endure any weight, even if they were straightened

Dr T G Morton—In again referring to the question of anesthetic, I would like to ask if any of the gentlemen would fear to administer ether in such a marked case of spinal curvature, especially in so serious a case The only sudden death under ether that I have ever witnessed was in a patient at the Pennsylvania Hospital, within thirty minutes after operation the patient died from edema of the lungs, very suddenly My own feeling is that there would be a great risk in this case, and that the suggestion of a wheeled chair is the best plan to follow

(*To be continued*)

Vermont State Medical Society

Eightieth Annual Meeting—Held in Rutland, Oct 12 and 13, 1893

Reported by Dr D C Hawley, Secretary

Second Day—Morning Session

(*Continued from page 903*)

Dr T D Crothers of Hartford, Conn, read a paper entitled,

MEDICAL TREATMENT OF INEBRIETY

The following is a brief summary of his paper

"The disease of inebriety, like other diseases of the brain and nervous system, follows a uniform movement controlled by laws of dissolution, and conditions and causes that can be determined Locks and bars pledges, chemic restraint, by drugs, appeals to diseased higher brain sections, appeals to the credulity and disordered senses and emotions, by 'gold cures' or specifics, are all empirical Our central object of all treatment is to restore the organism, so that the narcotic of alcohol or other drugs will not be demanded

"The disease of inebriety follows a uniform line of events, from certain special causes and conditions The prognosis and treatment depend altogether on a clear apprehension of the case The first thing is to place the patient in the most favorable conditions for cure, where all his surroundings can be helpful, and the best means applied to build up and restore his brain and nervous system This may be done in an institution, or at home under the care of a nurse

"The withdrawal of spirits and the use of baths and massage daily, with brain rest, are essential Remedies, such as the bitter tonics, mineral salts and acids, nux vomica and often bromids and iodids are valuable

"The use of nutrients, with rest and baths, fulfill most all the demands of each case *Reconstruction of cell and tissue is the object to be sought* Restraint, protection, liberty, and the application of means to meet all the demands and abnormalities must be applied

"The entire subject must be studied from a higher level and along the line of accurately observed facts"

THE SURGICAL TREATMENT OF HEMORRHOIDS,

was the title of a paper read by Dr D C Hawley of Burlington He said 'In all severe cases of hemorrhoids, surgical treatment is the most satisfactory The arteries and veins of the lower portion of the rectum run nearly parallel with the long axis of the gut, hence it is that a longitudinal incision rarely causes much hemorrhage

"The principal methods of operating are four in number 1, by ligature, 2, by the clamp and cautery, 3, by excision, 4, by crushing

"The bowel should be thoroughly emptied and the parts about the anus scrubbed, shaved and washed with carbolic solution In all cases, the sphincters should be thoroughly but carefully dilated"

After describing in detail the various methods of operating, and the after treatment, he said "The patient should be kept strictly in bed for about ten days or two weeks, then may gradually during the next week exchange the bed for a reclining chair or lounge Complete recovery usually requires about three weeks, and I consider *time* an all important factor in the after treatment Patients should not, as they are often allowed to do, get up and go about in ten days or two weeks, as thereby congestion of the hemorrhoidal vessels is favored, healing is delayed and perfect recovery is retarded and perhaps prevented

'No one method can be claimed to have advantages in all cases over any other, and the proper selection of an operation depends upon the good judgment of the operator The operation by ligature is probably the safest, as it is the simplest (requiring no special instruments), and involves least risk of after hemorrhage It is best in case the patient is anemic and where the tumors are large and vascular

"Pain after the operation depends more upon whether or not a portion of the skin has been cut or burned, than upon the method employed Hemorrhage at the time of operating is sometimes troublesome, when the clamp and cautery are used

"Whitehead's operation is, in my opinion, seldom indicated"

A paper on

APPENDICITIS

Was presented by Dr J B Wheeler of Burlington

The following is a brief summary

1 Among male patients, the great majority of all cases of peritoneal inflammation originate in appendicitis

2 In spite of the fact that many cases are mild and recover spontaneously, the death rate of medically treated appendicitis is very high, and the list of recoveries contains many cases which afterward recur

3 The death rate of appendicitis treated by timely surgical operation is very low, and the cures are complete and permanent

4 The late operation for appendicitis is a last resort, and like all operations done in extremis, has necessarily a high death rate Moreover cases which recover after a late operation are in less satisfactory condition, and have a much longer convalescence than cases treated by early operation

5 In the beginning of a case of appendicitis we are unable with our present knowledge of the disease to predict the end

6 Until our prognosis has greatly improved in accuracy, the safest general rule for the treatment of appendicitis, is to remove the appendix as soon as the diagnosis is satisfactorily established

Adjourned

Second Day—Afternoon Session

Dr O C Baker of Brandon, read the next paper,

DIAGNOSIS AND TREATMENT OF EMPYEMA

He said "I shall speak only of empyema as pus in the pleural cavity, and not in the general sense of the term A wrong diagnosis, as a rule, means death to the patient, and I would suggest in all cases of doubt that we explore with the hypodermic needle Pus in the pleural cavity demands immediate evacuation The treatment is included under three heads aspiration, free opening with or without a drainage tube, and rib section The results of aspiration are disappointing Free incision with drainage is often very satisfactory, and gives good opportunity for washing out the cavity"

Dr Geo Rustedt of Shrewsbury, read a paper on

PURPURA HEMORRHAGICA, WITH REPORT OF CASE

The patient, a girl, aged 11 years, suffered in March, 1880, with uterine hemorrhage, which was controlled in a few days Four days later severe epistaxis supervened, which was very stubborn, and accompanied with livid spots, of variable size over body This condition continued at intervals until June, and then subsided The epistaxis returned in the spring of 1883, with increased vigor, when there was dilatation of heart, swelling of extremities and slight albuminuria The case again yielded to treatment and she enjoyed fair health until autumn of 1886, when a slight attack of epistaxis came on and was easily controlled On the following morning was summoned in haste to the patient and found her dead, there having been, however, no return of bleeding The family history shows that one paternal uncle was taken suddenly with severe pain in elbow and died in two days, and another had a tooth drawn at night and was taken with pain and swelling of jaw and died in three days

A paper on

THE USE OF CHLORAL HYDRATE

Was presented by Dr J B Woodhull of South Shaftsbury

He said 'Chloral produces sleep that is like natural sleep The patient wakes without headache, has not been troubled with bad dreams and is refreshed I usually prescribe chloral with an equal quantity of potassium bromid, and a very small dose—one-twentieth grain—of morphia I have had marked success in the treatment of vomiting of pregnancy, with the above combination I have had no trouble with patients forming a 'habit' I never tell patients what they are taking, as soon as you do so there is danger"

The following papers were read by title only "Thoughts Regarding Heart Failure (so called)," by Dr E V Trull of Manchester, "Hypnotism," by Dr Geo B Hyde of North Hero, and "Denuded Cranium, Its Treatment by Perforation of the External Table of the Skull, and Thiersch Method of Skin Grafting," by Dr E M Pond of Rutland

The report of the Committee of the American Medical Association on Revision of *Constitution*, By Laws and Code of Ethics, was considered and was approved by an unanimous vote

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American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

Augustin H Goelet, M D President

Continued from page 906

THE NUTRITIONAL EFFECTS OF STATICAL ELECTRICITY, CONSIDERED IN RELATION TO HIGH FREQUENCY, HIGH POTENTIAL CURRENTS, AND THE TRANSPARENCY OF THE DIELECTRIC

William J Morton of New York, said "I have not had time to write a formal paper, and will therefore communicate orally what little I have to say I have had prepared a number of tables which in reality contain the pith of the intended paper They represent the work in this direction done in my clinic at the New York Post Graduate Medical School and Hospital

I believe there is a greater unanimity among electro-therapeutists in favor of Franklinization than ever before, and that there is yet much to be said in favor of this modality of electricity in medicine I remember the day when it was said that this static form of electricity resided upon the surface, and could not penetrate beneath the skin, and that therefore it was of no value whatever, as it did not reach any of the tissues or organs It was not long ago when Moebius said that most of the effects of electrical treatment were due to "suggestion," and particularly was this the case with statical electricity

I am inclined to think that statical electricity will always remain as a useful therapeutic measure on a par with faradization and galvanization, but the trouble has been to convince ourselves and others that there was this power in it It is to the objective evidence of the physiologic effects resulting from electro statical treatment that I would now invite your attention

Let me point out the new relations which statical electricity has assumed to electro-therapeutics through the labors of a certain small number of men during the last two years It is by the reflected light coming from the brilliant labors of D'Arsonval, Tesla and Elihu Thompson in developing the high frequency high potential current, that we are enabled to say why it is that electro statical treatment is so beneficial

All along we were dealing with a beautiful principle of which we were not fully aware—that magnificent principle in Nature that intermitting energy has an enormous power, that things which have wave movements are those which are exhibiting power Thus, light, heat and electricity are vibratory motions The statical form of electricity is an oscillating or wave motion due to the oscillation between the electric charges set up in one vicinity and those set up in another vicinity

Now what is the present situation in regard to these high frequency high potential currents and how is it that statical electrization can be brought into this category? The high frequency high potential current is simply a periodical current, where the electrical energy is cut up into waves or periods If these periods are very frequent—10,000 to 100,000, or even 10,000,000 per second—then we have a high frequency current in contra-distinction to the low frequency currents obtained from the ordinary faradic coil With this high frequency is a correspondingly high electro motive force It is electro motive force and not electrolytic conduction which is doing the work It has been said here today that there is no action on the human tissues except there is chemic decomposition, but this is not so There is an action on the human tissues which has nothing to do with chemic action, and that is what we are talking about in describing the effects of statical electricity

The relation between these high frequency currents and the statical electricity is easily explained If we suspend a Leyden jar in connection with any electro static machine, and cause a spark to pass, every time the spark passes there is a discharge of the Leyden jar corresponding to the spark, and oscillation takes place many thousand times per second Generally these oscillations of the discharge vary from 100,000 to 1,000,000 per second This is the periodic current with which we are dealing in electro-statics

Whether you use the Leyden jar or not, the result is the same If there is a plus charge on one prime conductor and a negative on the other, on approaching the rods there is a spark discharge, and at this moment there is exactly the same oscillating current produced This oscillation varies according to the resistance in the circuit If the resistance be great, the oscillations are reduced, perhaps even so much that the oscillations may be appreciated by the ear as a musical tone If there be no such resistance, you have a high frequency current, whose capability to penetrate the tissues seems to be without limit

In that remark we have the answer to the criticism that electricity resides on the surface, and does not penetrate the human body, for the resistance of the human body is as nothing against that of the particular form of the current As the static machine is set in motion, every particle of ether is set in motion in the room, and the same vibration is set up in our own bodies How strong that electrical influence may be is another matter, that it is strong I shall endeavor to show *in the tables* which I have prepared

In addition to the familiar mode of electric conduction, we must remember, 1, that there is an electro static field, and, 2, that portions of the human tissues are dielectrics when in the neighborhood of an electrical discharge

That there is an electro static field in contra-distinction to an electro-magnetic field may be easily demonstrated experimentally For instance, the space between the prime conductors is the electro static field, and if you put a patient in that field, he is affected by "the lines of force" passing through him It is only a question of how strong that field is and of its oscillations, to determine the effect on the human being brought under its influence That this field is one of mighty energy can be demonstrated by bringing an incandescent lamp into the field, when it will be seen to glow

We must, therefore, adopt the mechanical view that the electrical energy which produces what we call "the current" is *around* the wire, and not entirely in the wire, and that the wire is not a conductor as a pipe is of water, but the electrical influence is felt in the medium around the wire If this is not a conductor, then these same ether vibrations impinging on the dielectric put it in a condition of strain If that strain were maintained, and the charge did not change, nothing would happen But the discharge is first plus and then minus, and the surging movement is taking place thousands of times per second By a dielectric I mean a non conductor having a charge and in relation to another body having a charge

We say that the non conductors are "transparent" to periodic currents and "opaque" to constant currents It will be found that these periodic currents are conveyed by our non-conductors This important fact is demonstrated when you insert in a telephonic circuit a condenser, it is impervious to a constant current, but transparent to the periodical current The human body may be regarded as under two influences—the one where electro-static alternations are dissipated upon the conductors as a current, and the other where they affect the dielectric and still act as a current

Now, as to the effects on nutrition The patient may receive an electric bath for fifteen minutes, and the hard, striking spark for about five minutes—this is a customary treatment Many have not had much faith in the actual effect of such treatment, and for this reason I have endeavored to collect evidence on this point

The spark or bath causes augmentation of the circulation The spark when given along the spine causes a dilatation of the peripheral vessels, and the circulation is visibly increased The patient frequently breaks out into profuse perspiration If you will apply to a person's bare arm a long spark, you will see the spot is dead white, this is because there has been an instantaneous vaso motor constriction, but some minutes later, you will find it intensely red as a result of the secondary vaso motor dilatation This on a small scale represents what on a larger scale takes place through the entire organism of the patient

It has been stated in our books that statical electrization increases the pulse from fifteen to twenty beats, but my clinical observations show that in certain cases the pulse may be uniformly diminished as well as augmented (See tables) The change in the pulse depends upon the nature of the disease Many neurasthenic cases have a sub normal temperature, and immediately after treatment there is usually an elevation of the temperature of from half to one degree In a general way, it may be stated that the disposition of statical electrization is to produce an equalization from the centers—reducing a high pulse, and elevating a sub normal temperature or elevating a low or normal pulse and reducing a temperature above normal If both pulse and temperature are above normal both will be reduced.

Case 1—Mr C R, age 49, occupation, actor, diagnosis, tabes dorsalis, treatment, static induced

Date	Pulse Before	Pulse After	Temperature Before	Temperature After
April 25 1892	98	98	92.2	98.4
" 27, "	100	106	98.8	98.4
" 29, "	99	102	99	98.8
May 4, "	92	86	99	99.2
" 11, "	116	98	100.2	98.8
" 13, "	102	104	99	98.4
" 18, "	104	108	99	99.2
" 20 "	98	101	98.5	98.5
" 25 "	100	100	99	98.9
" 27, "	81	110	98.6	98.8
June 8 "	104	104	98.8	99.2
" 10, "	103	103	98.3	98.4
" 15 "	100	104	98.2	99.2
" 22 "	102	102	99.2	99.4
" 24 "	104	102	99.2	99.2
" 29, "	102	102	98.6	98.4
July 1, "	100	98	99.4	99
" 6, "	94	102	99.2	99.1
" 8, "	104	108	99.4	99.2
" 13, "	102	114	99.6	99.4
" 15, "	108	116	99.4	99.6
" 27, "	100	114	99.7	99.4
Aug 10 "	100	104	99.6	99.4
Sept 2, "	92	104	99	99.4
" 9, "	106	106	99.4	99.2
" 16 "	89	104	99.4	99.6

Remarks—Upon admission to electro-therapeutic clinic, Post-Graduate Medical School and Hospital, Dec 16 1891, had incoördination of movement in legs, slight in arms Lightning pains, swaying with eyes closed, thickness of tongue, halting speech, knee reflexes absent, cramps in legs, urination difficult, fingers numb, pupils do not respond *readily to light Weight, 93 pounds*

June 29, 1892 Weight, 113 pounds, gain of 20 pounds Stands steadily with eyes closed, no pain, locomotion less difficult, no thickness of tongue, speech improved Pulse raised, temperature lowered

Case 2—Mrs E R, age 43, occupation, domestic duties, diagnosis, neuritis left brachial plexus, treatment, Franklinic current, positive insulation, long percussive sparks to distribution of left brachial plexus

Date	Pulse		Temperature	
	Before	After	Before	After
April 1, 1892	84	80	99 4	99 4
‘ 8, ‘	99	85	99 2	98 5
“ 22, “	90	74	99 8	99 8
“ 27, “	80	76	99	99 4
May 11, “	96	80	99	99 8
“ 13, “	90	70	99 4	99 4
“ 18, “	78	82	99 8	99 8
“ 20 “	76	65	99 6	99 6
“ 27 “	70	64	99 2	99 2
June 29 “	72	76	99 2	99 6

Remarks—Pulse lowered uniformly, temperature little affected

Case 3—Mr W R, age 33, occupation, gasfitter, diagnosis, transverse myelitis, with spastic paraplegic symptoms, treatment, Franklinic current, positive insulation, long percussive sparks to spine, nerve trunks and distribution

Date	Pulse		Temperature	
	Before	After	Before	After
May 13, 1892	102	98	99	98 8
“ 18, “	98	108	99 8	99 6
“ 20, “	90	94	99 1	99 6
“ 25, “	100	98	100	99 6
“ 27, “	102	104	99	98 8
June 15, “	80	80	99 2	99
“ 29, “	80	88	98 6	98 4
July 1, “	88	88	98 8	98 7
“ 15, “	86	81	98 8	99 1
“ 20, “	88	92	99	98 9
“ 22, “	84	85	98 4	99 2
“ 29, “	80	96	99	98 8
Aug 5, “	90	96	98 8	99 3
“ 24 “	92	84	99	99 2
Sept 2, “			101 4	101 3

Remarks—Free perspiration always during treatment, gain in weight Recovered

Case 4—Mr J W, age 35, occupation, soldier, diagnosis, double sciatica, treatment, Franklinic current, positive insulation, long percussive sparks to lumbar and sacral plexes, to both sciatic nerves and distribution

Date	Pulse		Temperature	
	Before	After	Before	After
Mch 18, 1892	82	82	99 4	99
“ 21, “	85	74	98 9	98 2
“ 30, “	76	84	98 8	98 4
April 1, “	72	72	98 4	98 2
“ 6, “	80	78	99	98 8
“ 8, “	79	64	98 6	98.5
“ 11, “	72	68	98 4	98 2
“ 18 “	78	65	99	98 4

Remarks—Free perspiration during treatment Pulse lowered, temperature lowered *every* treatment

Case 5—Mr E W, age 37, occupation, nurse, diagnosis, sciatica right, treatment, Franklinic current, positive insulation, long percussive sparks to lumbar and sacral plexes, right sciatic and distribution (pain) and to general surface (nutritional)

Date	Pulse		Temperature	
	Before	After	Before	After
April 27, 1892	72	72	98 6	98 4
‘ 29, “	80	80	98 6	98 4
May 6, “	68	78	98 2	97 8
“ 13 “	74	76	98 4	98 4

Remarks—Six treatments, nutritional gain recovered Pulse little affected, temp lowered except when normal

Case 6—Miss E McM, age 25, occupation, domestic, diagnosis, left inter costal neuralgia, treatment, Franklinic current, positive insulation, long percussive sparks to painful points (neuralgia) and to general surface (nutritional)

Date	Pulse		Temperature	
	Before	After	Before	After
May 11, 1892	120	110	99 8	100 4
June 8	122	104	102 3	100 3
10 “	90	88	100	100 3
‘ 15 ‘	96	80	100	100
17 ‘	100	88	100 2	100 6

Remarks—Pulse full uniformly, temperature not much affected

Case 7—Mrs M E, age 54, occupation, bookbinder, diagnosis, paralysis agitans, hemiplegic type, treatment, Franklinic current, positive insulation, long percussive sparks to spine, flexures of joints and all muscles

Date	Pulse		Temperature	
	Before	After	Before	After
Mch 30, 1892	80	74	99	99
April 1, “	72	74	99	98 8
“ 6, “	68	68	99	99
“ 29, “	72	67	99 2	98 6
May 13, “	76	70	99 2	99
“ 20, “	66	63	98 8	97.8
June 15, “	80	78	99 6	99 5
“ 22, “	72	72	99 6	99 2
“ 24, “	72	78	99 1	99 8
“ 29, “	76	70	99 2	98 8
July 1, “	78	76	99	99
“ 6, “	77	67	99 5	99.3
“ 13, “	78	94	99.8	99 2
“ 15, “	80	82	99 7	99 6
“ 20, “	88	82	99 8	99 2
Aug 5, “	78	80	99 2	99.8
“ 10, “	78	80	99 4	99 6
“ 12, “	82	84	99	98.8
“ 17, “	100	90	99 2	99

Remarks—Gained 10 pounds Pulse lowered eleven times, raised six times, temperature lowered

Case 8—Mr W H B, age 59, diagnosis, neurasthenia

Date	Pulse		Temperature	
	Before	After	Before	After
Feb 22, 1893			97 4	98 4
Mch 2, “			96 8	98 4
“ 4, “			98	98 8
“ 7, “			97 2	97 8
“ 9 “			97 1	98

Remarks—Sub-normal temperature uniformly raised, pulse not recorded

Case 9—Mr W A H, age 57, diagnosis, (hypermetrophic astigmatism) neurasthenia

Date	Pulse		Temperature	
	Before	After	Before	After
April 6, 1893	88	88	99	98 4
“ 10, “	80	84	97 7	98 4
“ 11, “	80	96	98.3	98 8
May 3, ‘	96	88	97 4	98 4
“ 5, “	116	96	96 9	99
“ 8, “	82	88	97 6	98 4
“ 9, “	88	84	97 5	98 2
“ 11, “	112	92	97 3	98 3
“ 13, “	92	82	97 2	98
“ 15, “	84	84	97 3	98
“ 18, “	96	88	97 6	98
“ 22, “	92	88	98 3	98 7
“ 26 “	100	86	97 8	98 8
“ 27, “	92	86	98	98 8
“ 29, “	96	88	97 6	98 3
“ 31, “	96	88	98 4	99
June 1, ‘	84	92	97 8	98 6
‘ 2, “	96	88	98 2	98 6
“ 6, “	112	100	98.3	
“ 7, “	104	84	97 8	98 6

Remarks—Average pulse above normal, lowered, temperature sub-normal, raised, pulse lowered, temperature raised, sub normal, remarkable uniformity of raising a sub-normal temperature

Case 10—Mr J H F, age 55, diagnosis, neurasthenia

Date	Pulse		Temperature	
	Before	After	Before	After
Jan 24, 1893		72	97 2	98 2
April 4, “	70	76	98 4	98
“ 11, “	96	98	97 8	98 3
“ 13, “	96	88	98 4	98 6
“ 18, “	74	76		
“ 19, “	68	70	98	98 2
“ 25, “	88	72	98 6	98 4
“ 30, “	96	72		
May 7, “	84	68		
“ 14 “	80	72	98 4	98 6
“ 23 “	76	72		
“ 28 “	76	68		
June 4, “	84	76	98	98 8
“ 16 “	76	68		

Remarks—At first, pulse lowered nine times, raised four times, temperature lowered two times, raised six times, i e, pulse lowered, temperature raised, sub-normal

Case 11—Mr H E, age 33, diagnosis, neurasthenia

Date	Pulse		Temperature	
	Before	After	Before	After
Mch. 7, 1893			98	98.4
" 27	85	84	98.4	99
" 28, "	92	84	97.3	98.2
" 30, "	92	84	98.4	98.8
April 4, "	100	92	99.2	99
" 5, "	80	84	98.3	98.4
" 10 "	88	84	98.3	98.6
" 11, "	112	92	98.2	98.7
" 12, "	88	92		
" 14 "	96	92		
" 15, "	92	84		
" 19, "	92	96		
" 25, "	100	88		
" 27 "	104	80		
" 29, "	96	100		
May 3,	84	88	98.4	99
" 6, "	88	92	98	98
" 10, "	100	88	98.4	98.4
" 13, "	88	88	98	98
" 15, "	100	88	98.8	98.8
" 17, "	96	88		
" 19 "	84	84	98.4	not taken
" 20, "	96	80	98.4	98.4
" 23, "	not taken	80	98.4	99.1
" 25 "	100	88	98.2	98.7

Remarks.—Pulse lowered fifteen times, raised six times, unaltered two times, total twenty-three times; temperature lowered two times, raised ten times, i. e., pulse lowered, temperature raised, sub normal.

I have three observations on the effect of statical electrization on the excretion of urea. The analyses were made by Dr. Cleaves.

Case 1.—A. L., occupation, physician; diagnosis, lithemia; treatment, Franklinic current, positive insulation, long percussive sparks to spine, hepatic region and entire general surface for ten minutes, spray fifteen minutes three times a week.

June 19, 1893. Examination of urine, color pale yellow, faintly acid, odor normal, sp. gr. 1020, total amount for 24 hours, ℥ xx, no albumen, no sugar, urea, gr. vij to f ℥, total urea for 24 hours, 140.

June 21, 1893. Color reddish yellow, reaction acid, odor normal, sp. gr. 1030, slight precipitate of uric acid, total amount of urine in 24 hours, ℥ xvj, urea, gr. 8¾ to f ℥, total urea gr. in 24 hours, 138⅔.

June 23, 1893. Sp. gr. 1028, urea vj gr. to f ℥, total amount in 24 hours, ℥ xlviij, total urea gr. in 24 hours, 288, increase from June 19 to June 23, 148. June 29, urea 8¾ to f ℥. June 30, urea 8¼ to f ℥. No medicine given.

Case 2.—Mrs. E. L., age 35, occupation, domestic duties; diagnosis, chronic articular rheumatism; treatment, Franklinic current positive insulation, spray fifteen minutes, long percussive sparks to all affected parts and to general surface for fifteen minutes.

July 27, 1893. Examination of urine, quantity, 24 hours, ℥ xxxij, color reddish yellow, odor normal, reaction acid, sp. gr. 1030. Doremus' urea test shows 13¾ gr. to f ℥. Total urea gr. to ℥ xxxij, 440. Abundant precipitate of uric acid on standing in cold.

July 28, 1893. Urine color amber, odor normal, reaction acid, sp. gr. 1030, total amount for 24 hours, ℥ xxxij. Doremus' urea test, 19 gr. to f ℥. Total urea in 24 hours, 608 gr. Increase in nitrogenous elimination in 24 hours, 168 gr. Uric acid greatly diminished. Before, bottom of bottle covered; to day only here and there a crystal. Result obtained from two static treatments, and in less than 48 hours.

Case 3.—Mr. L. W., age 36, occupation, manufacturer; diagnosis, neurasthenia; treatment, Franklinic current positive insulation, long percussive sparks to entire spine and general surface ten minutes, spray fifteen minutes.

June 21, 1893. Urine examination. Color pale amber, reaction faintly acid, sp. gr. 1012, no albumen, no sugar, amount for 24 hours, ℥ lxiv, urea 5¾ gr. to ℥ j, total urea in 24 hours, 368 gr.

July 6, 1893. Color pale amber, no sediment, reaction faintly acid, sp. gr. 1025, no albumen, no sugar, urea 9¼ gr. to f ℥ j. Total amount 24 hours, ℥ lx, total amount of urea 24 hours, 555 gr. Increase since June 21, to f ℥ 3½ gr., total increase since June 21 187 gr. No medicine given.

The second case was one of chronic articular rheumatism. If uric acid can be greatly diminished, and the urea correspondingly increased, that is much better than the introduction into the system of solvents of uric acid. As a result of two static treatments, the total quantity of urea for the twenty four hours was increased about two hundred grains, and the uric acid greatly diminished.

Lastly, it must be noted that the patient gains in weight. I can recall one case in which a man gained forty-two pounds in five weeks.

My purpose, however, to-day is only to call attention to the fact that there is objective evidence that nutritional processes of the human organism are intensely affected by the statical form of electrization. I regard statical electrization as simply the beginning of a new era of electrization; in other words, a period when we can place the patient in the electro static field and secure remarkable effects thereby. The day of the periodic current in medicine I think will come, and will give us better results than we have now. Much as I respect Duchenne's dictum about applying electricity locally, I believe we are approaching a period in which our treatments should be made so as to affect the whole system. General faradization or galvanization is a comparatively feeble method; it has nothing to do with the general treatment of which I am now speaking.

The mechanism which I published in 1881, is the very one which is found to day to be essential for producing these electro static effects—the static induced current and the mechanism for its production have really proved to be the key to this whole subject.

I am glad that now after many years I can give evidence for the faith that has been in me; can in fact give proof that statical electrization profoundly affects the nutritional mechanism in living tissue.

DISCUSSION.

Dr. H. E. Hand said he had been particularly interested in statical electricity, yet until now he had had but a faint idea of the manner in which he had obtained his results in practice. This form of electrization undoubtedly affects the secretions for he had frequently observed that the specific gravity of the urine and the amount of the solids have increased. He knew the circulation must be influenced by statical electricity, because his patients had often returned to him with the statement that since the treatment they had had a feeling of stimulation, and their feet were no longer cold. For this reason, treatment had proved particularly beneficial in cases of neurasthenia.

It is also especially useful in muscular rheumatism, because it stimulates the hepatic function. He believed that all forms of rheumatism are largely due to hepatic trouble, and hence, the stimulation of the liver is an important element in the treatment. He had often observed a great increase in the body weight in those subjected to this treatment. As he had always been under the impression that the effect of the static spark was that of a stimulant, he was surprised to learn that the pulse was diminished. He had found the quantity of urea for the twenty-four hours increase from two hundred to four hundred grains.

Dr. Massey referred to a recent case in which the improved nutrition was only explicable by the effect of the static charge. The case was one of lupus of the skin, occurring in a nurse. As a result of a month's treatment there was an increase in weight of ten pounds, and a very marked improvement in her general appearance.

Dr. Herdman said he felt personally indebted to the author for the paper, and he hoped to have an opportunity to carefully study it at his leisure. He considered it one of the most valuable presentations on the subject he had heard.

The acceleration of the circulation in itself, it seemed to him, explained many things. As to the lowering of the pulse, the first effect on the circulation as the author said, was that of vaso-motor constriction, and the secondary effect, a dilatation. The vaso motor dilatation would account for the perspiratory glands being excited to unusual activity. We also can explain in this way the favorable influence on nutrition observed in neurasthenic patients. He believed that neurasthenia was essentially an anemia, and by anemia he meant that parts which need blood can not get a sufficient supply of it. This may be the case in passive congestion, as well as in conditions where there is a lack of blood in the part. This being essentially the condition in the spine in neurasthenia, this statical electrization would necessarily stimulate the circulation. In spinal irritation and neurasthenia he had found as a matter of experience that the circulation of these parts is increased and the general nutrition secondarily improved. The nervous centers as a result of the increased and quickened circulation are restored to their original activity of function.

Only a few days ago, Tesla in his presence admitted that these high frequency ideas started from the Leyden jar action, the action of the static machine and the oscillatory movement necessarily brought about by their high tension, hence, Morton's experiments were really the starting point of Tesla's astonishing experiments

Dr Walker wished to come before the faithful and acknowledge the error of his ways Last year he stated that he attributed the results of statical electrization largely to mental suggestion However, he went home and experimented further, and although his machine was one of those characterized by Dr Morton 'as only a toy," he had obtained very excellent results in the way of increased circulation The patients observed increased warmth of the feet for one or two days after treatment In rheumatic cases his success had been uniform, and the results were different from those he obtained by massage or other means

Dr Green was sorry he could not say he was a convert, although he had investigated statical electricity for some years The author had not shown a marked difference in the temperature although claiming a marked effect on the pulse, and he had given nosphygmographic tracings The speaker said that that in 1887 he had the pleasure of watching some investigations in hypnotism in the McGill University Here sphygmographic tracings were found to be different in the two wrists The author had also criticized his statement about the effect of electricity being due to chemic action The fact that there is an effect on secretion of urea and that there is a change in temperature and an equalization of the circulation shows that there has been a chemic change He has seen effects from the other currents he thought he could attribute to them, but had not had sufficient experience to lead him to feel that the results of statical electrization are not due largely to suggestion

Dr Sprague said he had been using the statical current in an empirical way, and was therefore glad to learn that this subject had been placed on a more scientific basis He also had obtained good results with the so-called "toy" machines in neurasthenic cases particularly One girl received treatment on alternate days with a little static machine, and by this means was able to obtain refreshing sleep and continue at her school work He did not yet understand why glass was better than ebonite in the machine He was at present using a Gaiffe ebonite machine, and it gave better results than he had formerly obtained with one of Atkinson's glass plate machines

Dr Plym S Hayes of Chicago, said that up to about ten years ago he was skeptical as to the actual utility of the static machine, but since then he had used it almost constantly, and he could verify most fully what had been said to day in its favor He was very thankful to Dr Morton for his tables, showing the changes taking place in the system as a result of statical electrization

One point of importance he thought had not been brought out, i e, whether the cell proper is affected by the passage of the galvanic current through the tissues Some hold that the galvanic current passes through the fluids surrounding the cells, and that the cells by their structure resist the passage of the current With the high tension of statical electricity he believed that the current acted directly upon the cell contents

Dr Cleaves said she could confirm Dr Morton's statements as to the nutritional effects of statical electrization One feature had not been alluded to in the discussion, the relief of constipation of years standing by the use of the Franklinic current Her method consists in making the applications to the reflex centers involved She had also observed the remarkable increase in weight in a great many cases In the cases reported in the paper, no medication was employed

Dr Morton, in closing the discussion, said he did not think Tesla yet fully realized that his original mechanism was the foundation of Tesla's remarkable experiments If suggestion can produce a lowering or raising of a pulse, uniform in each case, and affect the urea in the manner described, then it would seem to be as good as electricity, and a method of treatment which might well be adopted instead of electrical treatment Before accepting this statement, however, he would like to see some tables corresponding to those he had presented He had himself followed hypnotism quite closely, but had found nothing in it comparable to the results which he had described A continuous current can not pass through our tissues except by electrolytic conduction, and if this exists, there must be chemic decomposition, but these currents do not decompose the tissues they traverse

He did not doubt that the machines he had dubbed "toy" machines produced many good effects, but he hoped there would be a more general adoption of the larger and more useful machines There is much ozone and phosphoric acid formed during statical electrization, and these act upon the ebonite plates Moreover, the ebonite has a tendency to become brittle after prolonged use

He had not intended to touch upon the disease effects, and hence, had omitted to say anything upon the treatment of constipation by this form of electrical treatment

(*To be continued*)

Lancaster, Pa, Medical Society—The December meeting of the Lancaster City and County Medical Society was held December 6 There was a large attendance of members

Prof H A Hare of Jefferson Medical College, read a paper on "The value of the hand and tongue in diagnosis of diseases, and the treatment" This paper was discussed by a number of the doctors

The reports presented by the members showed influenza to be epidemic in the country, but it was stated that the disease is not as severe as in the past winters

Mitchell District Medical Society, will meet in the city of Seymour, Ind, Dec 28 and 29, 1893 An interesting and profitable program is expected Geo W Burton, Secretary.

CORRESPONDENCE

Women Kept Out of Salt Lake Medical Society.

Salt Lake City, Utah, Dec 5, 1893

To the Editor—I have been a member of the American Medical Association for seven years I think, sponsored at my admission by Dr Etheridge and Prof W S Haines, my preceptors I have paid my dues and appreciated the distinction of membership When I came to Utah, almost six years ago, I was, so far as I was able to learn, the only member of the parent society in this Territory The profession turned a cold shoulder to me, but I insisted upon thriving. In course of time, a well-meaning man presented my name to the local society for admission and I was turned down, one noble exponent of the art of medicine saying, 'if I were admitted (he admitting that my claims to fellowship were beyond controversy), "all the d—— hags in town would want in"—he referred to the women practitioners among the Mormons When this was reported to me, I said that they had Mormon men in their society, why not Mormon women who were graduates of a regular medical school (Philadelphia) and qualified practitioners? "Well, we need the men's money," they cried But you get women's money just the same, I further claimed But they did not abandon their very untenable position When it developed that I belonged to the American Medical Association and had belonged to the Chicago Medical Society, it struck some men of the local society as very absurd, and they came to me personally to apologize, and said the people present at the meeting where I was refused admission were not representative, and would I apply again Of course I refused. After this, this society sent one of its members East to attend a meeting of the Association as its representative. He was received and made chairman or vice-president, or something, from this Territory Recently, another woman asked for membership in this society and was refused—because she was a woman, the answer to her application stated, and they did not admit women Last year, I concluded to ask the American Medical Association why I should do my duty towards them when they did none towards me I had already written to one officer of the Association, at the time it recognized this society, and I received no answer So I wrote the President, and he advised me in his reply to go to Milwaukee in 1893 and lay my case, with "evidence," before the committee of grievance or other such functionary Milwaukee is not immediately adjacent to my place of residence and the walking was not good last spring, so I did not go I am again in receipt of my due bill to the American Medical Association Last year, I concluded not to put up any more, but they drew on me through a bank and I paid up Now, what I want to know is, What right has the American Medical Association to extend fellowship to societies which will not receive its members? Why should I put up five hard silver dollars every year* as my tribute of respect to a society which shows no respect for me? I am only one woman, way out in the repudiated silver district—but the Association owns lots of women on its list, and when it decided to admit women, it agreed to champion them Now, membership in this society is of no manner of value to any one, for most of the best representatives have left it and formed another society, and its meetings and productions would be of no advantage to a tyro, but it is the principle I am after—if there is one to be found in the premises, and before I pay any more money to the American Medical Association I want to know what I am getting for it? Sincerely, Ellen Curtis Gage, M D

What is the matter with the Journal, Dr Gage?

Rush Medical College

Chicago, Dec 8, 1893

To the Editor —Kindly announce in the Journal that the Faculty and Trustees of Rush Medical College have decided to introduce a resolution at the next meeting of the American Medical College Association that all students who begin their studies in 1895 with a view of graduating in 1899 will be required to attend four full courses of lectures in a medical college, of not less than six months each Providing that graduates of universities and colleges which give a suitable scientific course may be admitted to the second year in the medical college, and also that graduates from schools of pharmacy that require three years of study and an adequate preliminary education, and graduates of dental schools requiring two years of study and adequate preliminary education will be admitted to the second year in the College I am, yours very truly,

E Fletcher Ingals, Registrar

BOOK NOTICES

Surgery By Bern B Gallaudet, M D Demonstrator of Anatomy and Clinical Lecturer on Surgery, College of Physicians and Surgeons, New York, Visiting Surgeon, Bellevue Hospital, New York, and Charles N Dixon-Jones, M D, Assistant Surgeon, Out-Patient Department Presbyterian Hospital, New York Being the final volume of The Students' Quiz Series, edited by Bern B Gallaudet, M D Duodecimo, 291 pages, 149 illustrations Cloth, $1 75 Philadelphia Lea Brothers & Co 1893

This book is an extremely useful one of its class, much more complete than the ordinary quiz manual

The author has sought to *explain* the surgical topics of the day in clear and concise terms, and has succeeded well The style is rather dogmatic, but that could scarcely be avoided in a work so condensed

A Manual of the Diseases of the Nervous System By W R Gowers, M D, F R C P, F R S Consulting physician to University College Hospital, physician to the National Hospital for the paralyzed and epileptic Second edition revised and enlarged Vol II Diseases of the brain and cranial nerves, general and functional diseases of the nervous system, with 182 illustrations including a large number of figures Philadelphia P Blakiston Son & Co Chicago The W T Keener Co 1893 Price $4 50

The first volume of this magnificent work was devoted to diseases of the spinal cord and nerves There is therefore left for discussion in this volume the diseases of brain and cranial nervous system, and the thoroughness with which the subject has been considered, leaves nothing to be desired Whoever in the next few years attempts to cover the same field, will have very hard work, either to present a new topic or to present it from a new standpoint, and even then the chances are more than equal, that the point will have been already better said in Gowers No work could be more exhaustive within the limits of living issues, and few could be compressed into clearer or better English There is no disconnection, there is continuity and system from title page to colophon The paper is good and the illustrations are fair The vast amount of material compressed into this volume has necessitated the use of small type, but not the sacrifice of typographical excellence

Transactions Illinois State Medical Society

This handsome volume of 528 pages contains the proceedings of the Forty-third Annual Meeting, which was held in Chicago, list of officers since the organization, list of members, announcement of committees for the current year, the papers read at the meeting with the discussions thereon, a full account of the society business for the year, and the annual necrology report

Among the papers of historical interest we notice one by Dr W O Ensign on "Medical Societies of the State" It appears from this report that the oldest medical society in the State was organized in 1846, and still exists as the "Æsculapian Society of the Wabash Valley" The Chicago Medical Society was not organized until 1852

President E F Ingals in his address takes strong ground in favor of a National Department of Public Health

The papers as a rule are excellent, and reflect credit alike on the authors and the Society

The Forty-fourth Annual Meeting will be held at Decatur May 15, 16 and 17, 1894, under the Presidency of Dr Otho B Will of Peoria The society is in a flourishing condition, the membership list showing 595 active members

Annual of the Universal Medical Sciences A yearly report of the progress of the general sanitary sciences throughout the world Edited by Charles E Sajous, M D, and seventy associate editors, assisted by over two hundred corresponding editors, collaborators and correspondents Illustrated with chromo-lithographs, engravings and maps Vols V Philadelphia 1893 The F A Davis Company

The sixth issue of this great Annual is this year more distinctly inter-national than before The temporary removal of the accomplished editor to Paris, has enabled him to secure more well known names on the list of active editors, such as Du Jardin-Beaumetz on cholera and epidemiology, Benjamin Ward Richardson and others

As time has passed, the different compilers of this work have become more similar in style, so that the work as a whole is more uniform

The fortunate possessor of this work is spared the necessity of subscribing for so many medical journals, as he finds a carefully prepared digest of the different branches of medical literature, ready to his hand, and in most instances the digest has been prepared by one who is himself an authority on the subject of which he treats

MISCELLANY

The College of Physicians and Surgeons of Richmond, Va, has a class of 111 students

Saturday and Sunday Hospital Association —St Louis is to have a Saturday and Sunday Hospital Association, on the model of the London and New York Associations

Dr Joseph Price of Philadelphia, has proposed to tender his resignation as physician to the Preston Retreat, and the *Philadelphia Record* urges the appointment of a female physician to the prospective vacancy

They Like the Mayor —It is said that over two hundred physicians of Boston have signed a paper vouching for the purity and strength of Mayor Matthews' administration, and urging his reelection

Elizabeth Board of Health —President John W Whelan of the Elizabeth N J Board of Health is about to resign the position His successor will be Dr Victor Mravlag Dr Mravlag is the physician for the Pennsylvania Railroad Company and Surgeon of the Third New Jersey Regiment

Dr P O Hooper of Little Rock, Ark, retired from the Superintendency of the State Hospital for the Insane at that place, December 1 Dr Hooper leaves an excellent record for efficiency, and carries with him the good wishes of many friends Dr J J Robertson has been appointed to succeed Dr Hooper

Woman's Medical College in Russia —A new school of medicine for women has been started at St Petersburg, to which the State contributes 15,000 roubles annually The course at the school lasts four years, but students are expected to work from one to three years as well, in hospitals for women and children, before presenting themselves for the final examination

The Present Epidemic of Influenza —The sickness statistics of Michigan, according to Dr Baker, Secretary, have demonstrated the law that, generally, influenza (la grippe) is quantitatively related to the atmospheric ozone—the more ozone the more influenza, and the law that remittent fever is inversely related—the more ozone the less remittent fever The unusual amount of ozone, the increase of influenza and the falling off of remittent fever as shown in the State Board of Health Bulletin for the week ending November 18, illustrates these general laws

An Over Crowded Asylum —The Trustees of the Worcester, Mass, Lunatic Hospital, and the Worcester Insane Asylum have made respectively their sixty-first and sixteenth annual reports The daily average of patients in the Hospital has been 878 78, the largest within the history of the Hospital The wards of the Hospital are open to the students of Clark University Weekly clinics have been held at the Hospital during the winter and spring months Notwithstanding the enlargement of the buildings they are still overcrowded

Smallpox in New Jersey —At Elizabeth, N J, a rather brisk epidemic of smallpox has occasioned an adjournment of the county court and an interruption of other forms of business Four new cases were brought to light in a single day, and the local contagious disease hospital—a frame structure on the Newark meadows—is overcrowded It will be necessary to construct temporary shelter for the patients that continue to come in The Board of Health of the State has had representatives on the ground, for the purpose of checking the spread of the disease to other localities

Painting of Ambroise Pare —A movement is on foot to purchase for the Academy of Medicine, in West Forty third Street, the celebrated picture of Louis Matont, entitled "Ambroise ParC," which belongs to a son of the late Dr Nelson Place It was painted in commemoration of the first ligation of arteries by the renowned French surgeon, and after an engraving of it had been made, it was purchased by Dr Place, who was at the time in Paris Among the gentlemen who have subscribed toward the fund for its purchase are Dr D B St John Roosa, Dr Everett Herrick Dr J West Roosevelt, Dr W K Otis, Dr E L Keyes, Dr A L Loomis, Dr Joseph D Bryant and Dr A Jacobi —*Mail and Express*

Dr William C Hunt who for the last thirty years has been one of the Visiting Surgeons of the Pennsylvania Hospital has resigned, owing to his being incapacitated, in consequence of injuries received in two accidents Dr Hunt was connected with the Hospital for thirteen years before he was appointed Visiting Surgeon, as student and Interne making his whole service forty three years Before he received his injuries he was one of the best anatomists in the country, and a typical medical man His resignation was accepted with regret, and resolutions were passed by the Hospital authorities expressive of their appreciation of his long and faithful services

The British Medical Association —The Association has an active committee on inebriety and legislation, at the head of which is the eminent physician, Dr Norman Kerr A circular has lately been issued advocating strenuous laws for the management of habitual inebriates Three or more learned societies, numerous magistrates, chaplains and other persons interested in reformatory rescue and preventive work, have strongly advocated 1, power to compulsorily seclude habitual drunkards in special curative institutions, 2, curative seclusion for poor diseased inebriates at the public charge, 3, a removal of the existing hindrances to the immediate reception into a retreat of an inebriate voluntarily applying for admission, involved in an appearance before two justices "The Home Secretary having promised to receive a deputation and to introduce a bill into Parliament based on the suggestions of the departmental committee, I am instructed to earnestly appeal to all Christian ministers to petition or memorialize the Home Secretary or the House of Commons in favor of this amended legislation, so loudly called for in the interests of the helpless victims themselves, of their distressful wives and families, and of the general community"

Florida State Board of Health —The State Board of Health of Florida, has issued a catalogue of the licensed physicians of that State They number 541 Of these there are thirty-four "homeopathists" and nineteen "eclectics" Each judicial circuit has a medical examining board and there is also a "homeopathic" board The following are the secretaries

1 Dr C R Oglesby, Pensacola, 2 Dr G W Lamar, Quincy, 3 Dr S T Overstreet, Madison, 4 Dr J L Horsey, Fernandina, 5 Dr G E Welch, Palatka, 6 Dr M Kennedy, Bartow, 7 Dr F H Caldwell, Sanford

"HOMŒOPATHIC"—Dr C W Johnson, Jacksonville

The relation of the medical profession to the State Board of Health will be appreciated when it is borne in mind that neglect to report immediately any case of yellow fever, smallpox or cholera is punishable "by imprisonment not exceeding six months or by fine not exceeding one thousand dollars" There is no other State Board of Health that has the same legal power to secure prompt report of contagious diseases, thus greatly facilitating their prevention and spread May this not have been one of the causes that enabled the Board to prevent the spread of yellow fever from two well established points during the season just passed

It is to be hoped that when another catalogue of the licensed physicians is published, more details will be given

The Health of New York State —The bulletin of the State Board of Health for October shows that the reported mortality for the month has decreased from a daily average of 311 to one of 290 In the corresponding month last year about one hundred more deaths occurred The death rate for cities and large villages was 18 50 to 1 000 of population, and in the rural parts of the State about 15 50, that of the entire State being about 18 The mortality in rural towns is much less than that of last month, and less than it was a year ago The decrease applies equally to all parts of the State

From the principal zymotic diseases, except from diarrheal diseases, which caused 861 less deaths than in September, there has been an increase in mortality The autumn increase in typhoid fever, which was low last month, is greater than usual, fifty more deaths occurring than in last October, the increase has been in the maritime and Western districts There were 185 more deaths from diphtheria than in September, and the increased prevalence over last year continues, being confined to the Southern and Central districts Its prevalence is noted in Haverstraw, Delhi, Sandy Hill, Moreau and Ilion There is a slight increase in scarlet fever, but it is less prevalent than last year Measles and whooping cough are decreasingly prevalent and cause few deaths Smallpox is diminishing in New York and its neighborhood The temperature for the month was a little above the average of fifty-two degrees

New Hospitals —Passaic, N J, is to have a $50,000 hospital in the spring

The Central Maine General Hospital at Lewiston, is to be enlarged

The State of Wyoming will build a public hospital for miners

Lord Aberdeen opened the new Victoria Hospital at Montreal December 2 It was built by Lord Mount Stephen and Sir Donald Smith at a cost of more than $1,000,000

The Meriden (Ct) Hospital has just come in possession of a very large collection of surgical instruments valued at $1,000 and a complete library of medical works, bequeathed by Dr H E Way of Bristol, who died several months since Dr Way was son of the late Samuel Way, a former respected resident of Meriden, and his sister, Mrs James Hall, still resides in the town Although Dr Way had been for many years a successful practitioner at Bristol, he never lost his feelings of affection for the place of his birth The gift adds very materially to the equipment of the Hospital and is highly appreciated by the physicians and Matron Baumann The Hospital also received on Thanksgiving day, through the kind generosity of Mr and Mrs John Gallivan, the Kensington Avenue florists, a very handsome lot of flowers, the beauty and fragrance of which were enjoyed alike by the matron and the patients —*Meriden Journal*

The Prudential Committee of the general hospital, New Haven, are about to establish a maternity hospital in connection with the main institution Plans for the building are already prepared and it is expected that it will be ready for operation in the spring The fund by which the hospital is to be established is being raised under the direction of Eli Whitney, Jr , who has already secured about one-half the money necessary It is proposed to make the institution one of the best of its kind in America, and better than any at present in New England The hospital is to be under the supervision of an obstetric specialist The management of the Yale Medical school and that of the Connecticut Training school are interested in the proposed institution Part of the hospital will be devoted to free beds

New Rush College Laboratory —Preceded by formal exercises, the doors of the new laboratory of Rush Medical College were thrown open to the students December 4 At 4 o'clock every seat in the big lecture-room of the old building was taken, and the late comers were obliged to stand in the rear of the balcony President Edward L Holmes called the assemblage to order and briefly stated the object of the gathering

This invocation was delivered by the Rev Dr John L Withrow pastor of the Third Presbyterian Church Dr Henry M Lyman delivered the dedicatory address He said he remembered how the first class of the Rush Medical College had met fifty years ago yesterday in a small wooden building opposite the Sherman House In those days little was known of the science of medicine, but the art of medicine was old and well understood and practiced The speaker referred to the fire of 1871, and to the good judgment of the trustees in erecting the college on its present site near the big hospital From a small institution the college had extended gradually from year to year, until now it has outgrown its clothes Now the trustees hold $200,000 worth of property The new laboratory which was opened he declared was equal to that of the best medical colleges

Drs James H Etheridge Walter S Haines, James Nevins Hyde, Nicholas Senn and John M Dodson, then in succession made a few remarks

President John M Coulter of the Lake Forest University spoke next He said that many of the present generation were wont to refer to their successes by pointing out that they had grasped their opportunities He thought it to be the duty of this generation to prepare better opportunities for its successors

The new laboratory is located on the south side of Harrison Street opposite the old Rush Medical College It is a five-story and basement structure with a massive stone front and cost $95 000 In its interior it is modeled after the most improved plans The rooms are used for the following branches of work

First floor, physiology second floor, histology, third floor, chemistry, fourth floor, materia medica, fifth floor, dissecting room

Adjoining the dissecting room there is a large demonstrator's room

Funds for the erection of the new building were subscribed from the private purses of the members of the Faculty, and the Faculty waived any claim to compensation for their services for the last year

The Brunswick Yellow Fever Relief Fund —The Yellow Fever Relief Committee adopted the following resolutions November 30, with the request that they be published by the press

"The expenditures for charity, to those familiar with the circumstances surrounding our people before and during the epidemic, need no explanation More could have been wisely expended had the treasury authorized it The expenditures of the commissary, beyond the distribution of supplies sent by a generous public, were largely to purchase supplies of which the commissary ran short, and in the purchase of stimulants for the sick and special food for the convalescent

'The city treasury, due to bank failures and other causes, was empty The large expenditures for police sanitation and special sanitation, made necessary by hurricane and flood, have fallen upon this committee as the only organized body which could attend to these matters It was thought wise to keep as many male adults, who must necessarily be fed, at work as possible, thus keeping them out of mischief, and creating the feeling that they were earning the food and money received Every effort has been made through the preachers of this city, the members of the committee, and special canvassers to investigate carefully and distribute rations, money, and clothing to the needy, no matter what their circumstances under ordinary conditions had been

"Confronted by the said conditions of the past three months, we have dealt with them as best we could, meeting emergencies as they arose Funds have been practically exhausted, at times with rations on hand to last but three days Counting upon the generosity of the American people, we have purchased supplies on credit, and our trust has been sustained, for funds and provisions came The circle of those needing aid widened daily during the first days of the epidemic Those on the islands and in the country have been considered within the range where assistance should be rendered when needed, and over six thousand people have received assistance

"When, upon the partial subsidence of the epidemic, careful investigation of our supplies and funds indicated that we could pull through, thankful to a generous public, which, in times of great general distress, had come to our aid, we announced that, with donations already en route, we would ask no further aid—that we desired no surplus, and would trust the future to bring us business and place the people in a position to help themselves

"To the railroad and other transportation officers, to a great and generous public, to the public press of the country, and to each and every other agency and individual contributing to relieve the distress of the people shut in here as a besieged city, we tender our heartfelt thanks

'Thomas W Lamb, President and Mayor"

'L C Bodet, Secretary

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from December 2, 1893 to December 8 1893

First Lieut Charles Willcox Asst Surgeon will be relieved from temporary duty at Angel Island Cal on the arrival there of Major Benjamin F Pope Surgeon and will report in person to the commanding officer Boise Bks Idaho

Col Charles Page Asst Surgeon General retirement from active service this date Dec 4 1893 by operation of law under the provisions of the Act of Congress approved June 30 1882, is announced By direction of the President

First Lieut Francis A Winter Asst Surgeon U S A is relieved from further duty at Ft Wingate N M and from temporary duty at Ft Bayard N M and will proceed to New Ft Bliss Texas and report in person to the commanding officer for duty at that station

LETTERS RECEIVED

(A) Ayres D Ft Plain N Y Allen E P Athens Pa (B) Burnett C H Philadelphia Pa Brown, C F St Peter Minn Beck, G, Bern, Switzerland Bacon C S, Chicago Ill (C) Cleaves Dr M A New York City N Y Chase R H Frankford Philadelphia Pa Carter R H Waco Tenn (D) Davidson S S Mercer Pa Dougan W McKay, Otoe Oklahoma Dunglison R J Philadelphia Pa (E) Eastman C A Hudson Mass Edwards Wm M Kalamazoo Mich (F) Fletcher C A, Kalamazoo Mich Flint A, New York N Y (G) Gores, F C Cincinnati Ohio (G) Gould Geo M, Philadelphia (H) Heath F C, Indianapolis Hofheimer Dr J A New York City (J) Johnson C J San Francisco (K) Khuginsmith J P Blairville Pa (L) Lydston, J A Chicago Ill (M) Motter D M G Lancaster Pa McKibben A L, Green Garden Pa Morrison W H, Holmesburg Pa (O) O Connor F B Jr Brooklyn N Y Osler Wm Baltimore Md (P) Pepper Wm, Philadelphia Parsons F S Philadelphia Perpœna Chemical Co, New York N Y (R) Ricketts B Merrill Cincinnati Ohio Ruggles Gale Co Columbus Ohio Rebman F J London Eng (S) Starr F N G Toronto Can Steiner D W Lima Ohio (T) Tiffany Flavel B Kansas City, Mo (W) Watkins, P L, New York N Y Williams D A Franklin, Ohio

The Journal of the American Medical Association

Vol XXI CHICAGO, DECEMBER 23, 1893 No 26

ORIGINAL ARTICLES

A GLANCE AT THE AMERICAN MEDICAL PROFESSION SINCE THE BEGINNING OF THE PRESENT CENTURY

BY ROBERT HUNTER DALTON, M D

ST LOUIS, MO

To estimate the progress of medicine since the beginning of the nineteenth century, it is necessary to view the conditions of that period Physicians then were not troubled with obstacles and responsibilities as they are now, as the calling rested on the same basis with all other common enterprises Practitioners, whether regularly bred or impostors, had liberty to offer their services, and there was little difficulty in justifying their work among the people, who knew much less about medicine than they do now Quacks with gift of gab and popular manners were sure of success

There were no specialties then, but naturally, in every community, some practitioner sprang up into notoriety whose genius led him to feats of surgery, by which he gained superior fame Opportunities of medical education were so restricted that a majority of physicians in rural and village communities were either self-taught or served a term of apprenticeship under some popular doctor of experience Scarcity of money and difficulty of transportation were hindrances to all but a few Transylvania was the only school in the West and South, only three of any note were in the Northeast, and among these, that of Philadelphia held chief patronage, for as far along as 1830, the Pennsylvania University was crowded with students from New York and the New England States Medicine was then taught almost entirely from the rostrum, clinics being left out at Transylvania, and occupying only one hour of every week at the Pennsylvania Hospital in Philadelphia The chairs of theory and practice and the institutes entirely overshadowed all others, and the professors of these were favorites of every class, indeed, they were fairly worshiped Any octogenarian now living who listened to Charles Caldwell at Lexington, Ky , or Nathaniel Chapman of Philadelphia, in 1827, will bear witness to this, for he must have been charmed by their eloquence, especially that of Caldwell, who may have had equals in other branches of oratory, but never a superior His person was of the grandest type, six feet two or three inches tall, well proportioned and as straight as an arrow, and modeled like an Adonis, all except his feet, which were incased in shining boots No 10 or 11, of which he seemed to be vain His eye was that of an eagle, and his bald head, with a broad, projecting forehead, thin lips and ruddy cheeks, gave him the appearance of a superior being He never failed to arouse the enthusiasm of the class as he gracefully entered the doorway every day at 10 o'clock, elegantly dressed, and with hat in hand marched up to the rostrum, while the house was shaking with thunderous applause Booth and Forrest never created a louder stamping of feet His hour never seemed more than twenty minutes, and while speaking, every action was grace and every word was music Indeed, Caldwell had a right to be vain But alas! envied by his colleagues and victimized by their secret ex parte machinations, he was finally superseded and left on the brink of old age to pine away in sorrow, with his laurels withering on his brow Such is fame

At that early time, medicine could hardly be called a science, the whole practice was more or less imbued with empiricism, for Marshall Hall, Brown-Séquard, Bell and other physiologic discoverers had not yet spoken Authority was paramount, and he who had the eloquence and logic to maintain his theories, whether they were right or wrong, was always a champion Didactic teaching was "the order of the day," especially in America, where polemics and democracy dwell together Humoral pathology was the principal subject of controversy, and the forces were nearly equal They were dubbed by the boys *fluids* and *solids*, the former referring all processes of disease to the circulation, the latter to nervous sympathy The fiercest battles, however, were fought to decide whether fever is idiopathic or symptomatic. Caldwell, with his rhetoric, was a brilliant symptomatist, and thus many out of the large class went home "dyed in the wool" According to his view, *ubi irritatio, ibi fluxus* is the *fons et origo* of all disease, and so firmly did he believe in the power of nervous sympathy, that he boldly declared that conception was amenable to it, thus disfranchising and rendering nugatory the spermatozoic individual with all his living energy

But while all this was going on in America, now and then an ambitious young graduate who had ventured across the perilous waters in search of additional accomplishments, was soon convinced that he had yet much to learn He was surprised to observe eminent professors walking the clinics surrounded by crowds of students anxious to see as well as to hear, while others, with gangs of seekers intently looking on, were delving in laboratories to expose to their view the hidden mysteries of Nature At once he became a lover of science, and appreciated the glaring necessity of reformation in the mode of teaching at home Availing himself of the favorable opportunity, the young man labored as a student again, and after ample observation, and storing his mind with all the improvements of medical art and science in Europe, he returned to his native country to enlighten the profession and fall in as a teacher of young men in some one of our schools And as intercourse with Europe became facilitated by steam, crowds of young men began to pass over, to imbibe the lore of renowned institutions there, and thus medicine soon became renascent in America, where it had still maintained the conditions of colonial times

Before the advent of this revolution, surgery differed materially from surgery now Though commanding the most profound admiration of every one, and exalting the bold operator far above his compeers, yet few, even the most talented, ever aspired to that distinction, for, in the absence of anesthetics, surgery was little less than human butchery, as it unavoidably tortured the victim of a capital operation beyond endurance Screams of the agonizing patient, wails of the nearest kindred, tears of sympathizing friends were never absent It is a fact that operating surgeons, having passed through these sad ordeals, were known to weep like children when all was over and they were away from the scene of suffering, and dared remember the tragedy Well does the writer of this, recollect an operation performed, in 1811, on his little brother, by the once celebrated Dr White of Virginia The child was 9 years old His right tibia, for two-thirds of its length, was necrosed, and the doctor might have left the lower third in its socket, but he did not He rapidly scooped out the entire bone, and then filled the gaping space with fine oiled tow and wrapped a loose bandage around it Then leaving the room to put up his instruments, tears were falling and he was wiping the instruments dry, and wiping his eyes at the same time Another case has not been forgotten a young physician, just returned from Philadelphia with his diploma, was called upon to amputate the leg of a poor young man brought from a distance and accompanied by his mother, sister, two brothers and several friends The large attendance signified the interest felt in the young man An empty old house across the river was obtained free of rent, and the doctor and assistant were on hand at the appointed time The leg had been amputated with firmness and dispatch, and directions given for attending to the case, and the two doctors were fording the river on their way home when, all at once, the operator burst into tears as his mind began to realize the pitiful scene, impressed but not noted while the operation was going on Doctors of the present generation may regard all this as quite silly, nevertheless, language fails to portray the horrors of bloody surgery in the absence of an anesthetic

Midwifery in those times was chiefly confided to the care of old women who, in the country and village, were called "granny," whether white or black In the slave States, the black granny was often employed and physicians were seldom called in, except in difficult cases—mal-presentation, hemorrhage, or retention of the "arter beth " In the few large cities of that period, doctors were just beginning to reap the benefit of that valuable practice, which had ever been in possession of midwives since the first accouchment of our Mother Eve Surgical gynecology was unknown then, and horrible cases of vesicovaginal fistula, uterine fibroids, and ovarian tumors were the painful, long continued preludes of death among the women of almost every neighborhood It is true that Dr McDowell of Kentucky had long since plunged his knife through the *sacred* peritoneum and turned out a very large ovarian tumor, saving a woman's life, but that only proved that he was a reckless dare-devil void of conscience, and so the great surgeon and benefactor of woman lived on and died, ignorant of the fact that he had rendered the name, *Ephraim McDowell*, immortal In fact he might have regarded himself as under the ban of public sentiment Such is often the reward of manhood and genius Thus went on the sufferings and misfortunes of the gentler sex, till about the middle of the century, when a poor young doctor, in feeble health at Montgomery, Ala , was known to be harboring, at his own expense, two or three negro women in a small board shanty in his own yard, which was laughed at as *Sims' Hospital* by some neighboring physicians These women were victims of vesicovaginal fistula, and Sims was experimenting to find a substitute for the hollow, conical speculum, which precluded free manipulative access to the injured parts The bent handle of an old pewter spoon was improvised, the rupture exposed, and nothing remained to insure a perfect cure, but ordinary mechanical digitation The jokers had enjoyed their fun for a year or more, but when Aunt Peggy and Aunt Lucy walked out smiling and rejoicing, dressed in their clean, homespun, white cotton frocks of sweet smelling odor, they began to bite their lips, and one of them even ventured to declare that he had already anticipated Sims, and a controversy seemed imminent But the poor young man only said "shoo fly," and went on stitching, till he found himself in Europe hobnobbing with royalty and nobility, while stuffing his pockets with shining shekels to scare away the wolf from his door forever The writer was several years older than Sims, and at that time lived in the same State not far distant, when he was struggling, as a young practitioner, for means to support his family, and he well remembers the witty comments of rivals, who criticised his methods of laying the foundation of surgical gynecology He must plead guilty to the charge of smiling as he listened to those jokers, but now he begs the privilege of falling on his knees to honor the memory of Sims And now, who will say that Dr Francis Marion-Sims[1] ought not to have a monument erected and paid for by American physicians to immortalize his name?

More than one-third of the century had passed away, when it became evident that the domain of medicine was too extensive for the qualification of any individual physician to discharge its functions with intelligence and honest service Therefore, specialties naturally came into vogue, enabling the general practitioner to fully equip himself for every phase of disease in his line, and at the same time, the simple stethoscope and the marvelous microscope, with many other minor improvements and facilities of great value, were inaugurated to augment the importance of our profession But when the middle of the century was reached, lo! chloroform had been discovered, and surgeons everywhere were seen quietly and leisurely carving the flesh of living, sensitive human beings, while their subjects were wrapped in the folds of lethean bliss, and then at a single bound, surgery leaped to the highest distinction The terrible agonies of frightful operations had ceased forever, and blood, in great measure, had ceased to flow by the surgeon's knife, being restrained by more careful cutting, and the genius of Esmarch In addition to all this, the civil war came in 1860, not only to alter, with terrible vigor, the basis on which our political institutions had rested from the beginning, but to arouse the energies of the American mind, in the way of invention for the benefit and comfort of the race, to a degree never witnessed before, and medicine was not left in the rear of that progress

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[1] Named after General Francis Marion of the Revolution

For some years the microscope had been sporting with bacteria, but only as a biologist would scrutinize the appearance of a new species, but now bacteria began to be suspected of playing an important part in the production of disease, and forthwith the eye of almost every physician was piercing the lens to observe the habits, potency and peculiarities of these mysterious, imponderable minutiæ of life, but thus far the investigation fails to result in any satisfactory or positive conclusion Whether the microbes are the cause or mere harmless accompaniments of disease is yet a question However, one great benefit has already resulted, aseptic surgery, almost equal to the discovery of chloroform, has been established and healing by first intention fairly secured

Whatever may be the final outcome of this earnest inquiry, an honest review of the last half century will show, beyond peradventure, that our profession has vouchsafed to mankind, independently of its grand achievements in the way of sanitation and quarantine, everlasting benefits entitling it to the highest honor, but when we take into consideration the fact and truth that the nation's health and vigor have, in the meantime, been fortified by medical science, against the assaults of deadly epidemics, that sacrifice so many thousands of human beings every year to the Moloch of contagion, we are startled at the magnitude of the obligation

Public health is manifestly a matter of the gravest importance and can not be too highly regarded, for a nation, like an individual citizen, is strong and progressive or weak and inert, according to its condition of health and vigor, for a nation is only an aggregation of individuals Look at John Bull He dines every day on roast beef and feels buoyant, and then he bounds away into enterprise with enduring muscles and tensive nerves, hustling among the nations and beating his warlike tattoo from the rising to the setting sun On the other hand, behold the Celestial King He lives on a little pale rice and feels lethargic, and then he reclines in vaporous dreams to vegetate, as he has been doing for the last two thousand centuries or more A feeble, ill-nourished people are always cringing slaves, and ill health is equally debasing to a nation

Hitherto all efforts to guard or promote public health have been more or less due to the spontaneous intervention of physicians, supplemented occasionally by State or local authorities, but now there seems to be a reasonable demand for the general Government to recognize it as a Department, with all the functions of a Cabinet office So mote it be

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THE IMPENDING REVOLUTION IN MILITARY SURGERY CAUSED BY THE NEW INFANTRY RIFLE

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Some nineteen-twentieths of all the wounds received in any modern battle are from infantry rifles, and from the machine guns England, France, Germany, Austria, the United States, and some other nations, have recently adopted magazine guns for their infantry which can be fired sixty times in a minute, while the Gatling machine gun can throw 1,000 bullets in the same time

A new powder is used which doubles the velocity of the bullets and is smokeless, and sends the missile over two miles, while the cartridge is less than half the weight of the old one, enabling the soldier to carry more than double the former number of cartridges

These weapons change the conditions of warfare, so that all open ground can be swept with a storm of bullets, before which men can neither charge nor stand still The only exception is where the country is rough enough to admit of an advance by alternately crawling through hollows, and making short rushes over narrow crests from one hollow to another

The old charges of dense lines of cavalry and infantry over open ground are ended forever

This new condition of things has altered the infantry tactics, so that the fighting lines are longer and thinner, the men being separated further from each other Five thousand infantry used to make a double line of battle about a mile long Hereafter they will extend two miles, and sometimes even three or four miles, and firing will commence as soon as men can see each other, which may be at the distance of a mile and a half All this introduces into field surgery numerous changes which may be described under two heads 1, surgical tactics, or the general management on the field of battle, and 2, the operative treatment required by the peculiar wounds made by the new guns

First, as to surgical tactics in our civil war the first aid to the wounded was given by a few assistant surgeons detailed to accompany the "line of battle," or "the fighting line," as it is now called Each of these officers served from three hundred to a thousand men, giving temporary aid, but not attempting important operations, and sending the wounded back on foot or on litters to the field hospitals, whenever a lull in the firing permitted it As the lines will hereafter be stretched out to such a great length, it is probable that the extreme right and left of the assistant surgeon's charge may get beyond his reach, and more medical officers will be needed at the fighting line However, the increase may not be very great, owing to the modern plan of "first aid" service Four privates in each company are instructed by the surgeon in weekly drills They are taught the art of stopping hemorrhages, of dressing wounds and fractures, of lifting and carrying men on stretchers, on extemporized litters, on their own backs and on horses or mules, and are trained in various other matters concerning "first aid" Each of them carries in his hip pocket a small "First Aid Package" containing a little sublimate gauze and a triangular bandage, with printed directions on the wrappers, and pictorial illustrations on the bandage, to assist the soldier's memory In battle these privates act as fighting men until ordered to collect the wounded, or otherwise attend to them, when they lay down their guns and proceed to their work, the rest of the company being forbidden to leave their posts

This weekly drill has as yet been introduced into only one post of our army, which is Fort Sheridan near Chicago There Surgeon-Major Girard has inaugurated the plan in full form It is not yet decided how long it is best to continue the education of each squad Some advocate changing them often, so as to gradually bring the whole company under the training It is obvious that with the help of these educated privates the assistant surgeon at the front can serve a longer line of battle than formerly

The assistant surgeons at the front select places for "First Dressing Stations" near the fighting line, and the instructed privates conduct or carry the wounded there whenever a lull or a cessation of the firing permits Until then the wounded should lie flat on the ground where they are, or get behind any available shelter The wounded being temporarily cared for, the instructed privates return to the fighting line

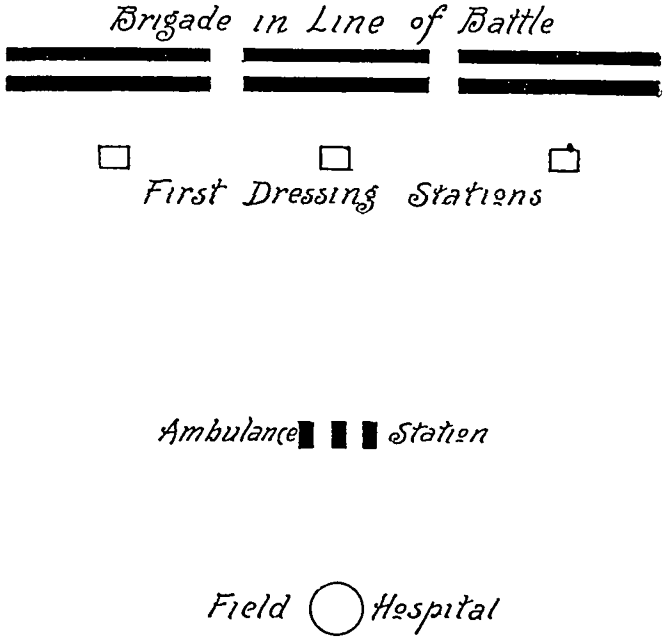
The assistant surgeons examine the wounds and dressings and correct any error or omission Farther to the rear, as near as the fire of the enemy and the topography of the ground permits, the ambulances are assembled under the charge of a line or staff officer, subject to the orders of the surgeon Here at the beginning, the "Hospital Corps" is stationed This consists of hospital stewards and privates enlisted for this special work, to the number of four for each battalion of troops They are not combatants They are thoroughly trained and wear the red Geneva cross upon the left arm By the comity of all civilized nations they are never to be intentionally fired on, and never to be taken prisoners, so that they are safe everywhere except when exposed by the actual operations of the fighting lines against each other In Mohammedan countries the badge is a red crescent, which gives the same protection Each of the Hospital Corps carries a pouch containing the following articles, viz

Ammonia aromatic spts , 1 oz
Bandages, roller, No 4
Candle in tin box, No 1
First aid packet like that of the instructed privates, No 1
Forceps dressing, No 1
Iodoform sprinkler, No 1
Jackknife, No 1
Lint, cor subl , 2 oz
Needles, medium, 1 paper
Petrol carbol ½ oz
Pins, common, 1 paper
Pins, safety, No 6
Plaster, adhes 1 spool
Scissors, medium, No 1
Splints, wire, No 2
Sponges in bag, No 2
Thread, linen, 20 yds
Tourniquets, field, No 2
Wool, boracic, 2 oz

The Hospital Corps, thus equipped and provided with litters, moves forward leaving the ambulances at the nearest safe point, meets the instructed privates at the front and carries back all the wounded not able to walk to the ambulances, and places them in the vehicles They are thence carried back to the field hospital This is a spot selected so as to be if possible, tolerably safe from fire, in proximity to water, and in winter sheltered from cold winds In settled countries, houses or barns can be utilized The medical officers not detailed to accompany the fighting line are assembled at the field hospitals, or "field depots" as they used to be called, where the operations are performed, and the wounded in other ways more completely provided for than at the front As the fighting lines will be more than double in length and in large armies may extend fifteen or twenty miles, the field hospitals will have to be more numerous than formerly, and have fewer surgeons at each From these, the ambulances come and carry the wounded to camp or to any place desirable

Owing to the awful sweeping fire of the long range weapons, the field hospitals will have to be farther to the rear than formerly, unless there are hollows, ridges or breastworks admitting of nearer shelter In level, open ground, they may have to go back as far as one or two thousand yards This necessitates a great increase in the labor of bringing back the wounded on litters, for it must be remembered that in open ground ambulances can not approach the fighting line, as horses, drivers and wounded will all be killed Ambulances can not lie down when the gusts of firing become hot

The following diagram illustrates the relative positions of the fighting line and the stations, but not the distances



This arrangement of four "first aid men" in each company, supplemented by the Hospital Corps, will place the surgical tactics in a far more perfect condition than in former American wars, where the surgeons had no help in the field except a very few hospital stewards and some blundering, untrained musicians, spared from the front because they could not fight The Hospital Corps, including stewards, acting stewards and privates, but not including the instructed privates of the fighting line, constitute about 2 per cent of the entire army

The steward ranks above the first sergeant of a company and has a pay of $50 a month, assistant stewards have $25

In peace the Hospital Corps is on duty in the camp and post hospitals

The assistant surgeons on the fighting line have each an orderly carrying a pouch filled with surgical supplies

The United States have been slow to adopt the magazine guns, but at last have aroused themselves to the necessity of it, and have selected the Krag-Jorgensen rifle, which is a new repeater, throwing a small projectile much like those already introduced in European services, but in several respects superior to any of them

Before discussing the new wounds and their treatment, let us compare the old and the new bullets

When our civil war commenced, our army used the old Springfield muzzle loader The bullet was conical and had a diameter of fifty-eight hundredths of an inch and a length of about one inch, and was fired at a velocity of about one thousand feet a second At the close of the war, breech loaders were introduced, and the caliber was reduced to forty-five hundredths of an inch and the velocity was increased to 1,300 feet a second, but except in size the bullet remained without essential change

The older of these bullets produced wounds of a character peculiar to themselves Being large in size and slow in velocity, their effect on striking a bone was to produce a great shattering, while the missile, crashing through the mass of loosened bits of bone, flung them violently in every direction almost as if an explosion had occurred in the middle of the limb If the shaft of the femur were struck it was often comminuted for several inches If the bullet traversed the condyles of the femur, or the head of the tibia, half the knee joint was instantly reduced to a mass of bony gravel These wounds were of the most frightful character, and in the field of my observation about half the cases of shattered femur *died of shock by the end of the fourth day*, whether amputated or not

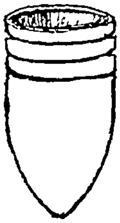


Fig 1

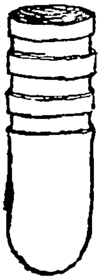


Fig 2

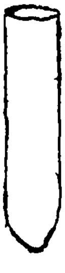


Fig 3

When the caliber of the rifle at the close of the war was reduced to 45, the shattering was less, and the shock probably diminished, but in the main the wounds partook of the same general character

The Krag-Jorgensen gun, and others of like type, produce very different wounds, and this difference will revolutionize certain parts of war surgery Smokeless powder is used, of such a strength as gives the bullet a velocity about double that produced by the old cartridge, that is to say, about two thousand feet a second The bullet is about an inch and one-third in length, and only thirty hundredths of an inch in diameter, being about as large as a good-sized lead pencil It consists of a casing of thin steel, or of German silver, filled with lead and nickel plated This casing with a harder metal than lead is to prevent "stripping" in the grooves of the rifle Its surgical effect is that the bullet goes straight through a bone without being spread and flattened out of shape, and consequently with less tearing and shattering than the old projectile

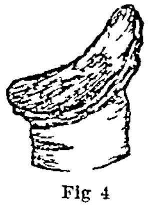


Fig 4

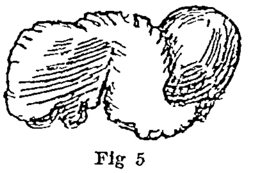


Fig 5

Fig 1, shows the large bullet used in our civil war, Fig 2 the 45 caliber used since, and Fig 3 the new projectile now coming into use

The old lead bullets were deformed *into every possible shape* on striking bones This spreading out of the lead greatly increased the shattering of the bone, and the tearing of the soft tissues beyond it

Fig 4, shows a spent bullet which I cut out from under the vastus externus muscle, where the concavity of the distorted bullet rested on the outer side of the shaft of the femur, not having velocity enough left to shatter the bone

Fig 5, represents an old-fashioned globular bullet which I removed It had struck a bone and was cut and spread open into a very singular shape

Dr Louis A La Garde of the United States Army, has studied the effects of the new projectile upon cadavers His experiments show that they are rarely deformed, but go straight through the bones without being altered in shape, or deflected from their course In one single instance, however, the lead broke through its hard metal casing and separated from it

Pure lead bullets are often cut and rasped into several pieces by the sharp projections of the fractured bones, and the metallic fragments diverge widely from each other

This comminution of the lead has given rise to a conjecture that the sudden stoppage of the motion converted the energy of the bullet into heat and melted it, causing the molten mass to be splashed about in all directions There is no proof, however, that such is the case I have taken out a great number of deformed and comminuted bullets, and never found a single one which presented any of the forms characteristic of molten lead The angles are sharp, the surfaces are scratched, and there is a total absence of any of the burnt appearances which molten lead would produce

Moreover it is impossible to generate a melting heat in that way Mr Victor Windett, an eminent mechanical engineer, has calculated for me the temperature possible if all the energy of the projectile were suddenly transformed into heat, and he finds that though the heat would be theoretically sufficient, if the energy at the instant of leaving the muzzle were all expended in heating the lead, yet this complete conversion is impossible At high velocity a large force is lost in the resistance of the air On striking the body most of the remaining energy is lost in perforating and shaking the tough tissues, and rending, shattering and dispersing the bony fragments, so that the proportion of heat left for melting is too small Beck of Europe, has also made the calculation, and found the same result The theory is therefore untenable

The most important thing from the surgical point of view, is the changed character of the wounds, made by the new projectiles, and the consequent modifications which will ensue

So far as the old weapon is concerned, I have made numerous experiments on the cadaver with the Springfield army rifle, choosing the old pattern (caliber 58), as well as carefully studying the wounds in field surgery during the late war

Several varieties of the new gun have been tested on cadavers by Dr La Garde of the United States Army, and by Beck, Delorme, Langier and Roget of Europe[1]

These investigations show the following facts

1 In a general way, we may say the old gun tears and shatters, the new one pierces

2 The old projectile creates more shock and "stops" a wounded man more effectually, the new one causes less shock and less injury

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[1] Fractures Expérimentales par Delorme, Traité de Chirurgie par Duplay et Reclus Traité de Chirurgie d' Armée par Chauvel et Nimier, etc

However, it is necessary to qualify these broad statements somewhat by the following observations

The new gun starts its slender projectile at a velocity of 2,000 feet per second If it strikes a human body within the distance of about three hundred and fifty yards it tears and shatters almost as badly as the old gun of 58-caliber European experimenters seem to suppose that this is partly peculiar to the new weapon, and speak of the effect as a "genuine explosion," an "explosive effect," etc However, they have not figured nor described any shattering which was not familiar to us in the wounds made by the 58-caliber projectile in our late war, but there is this difference the old conical 58 bullet shattered at all distances, so long as it had force enough left to break the bone the 45-caliber had less of this so called explosive effect, while the new 30-caliber ceases to shatter extensively at about three hundred and fifty yards, and produces more of a perforating wound, and continues in that style up to about one thousand eight hundred yards Beyond that distance, the shattering effect is resumed, which is a singular fact and one difficult to explain As nearly all wounds will occur between the distances of 350 and 1800 yards, it follows that in future wars most of the lesions will be of a perforating rather than of an "explosive" character

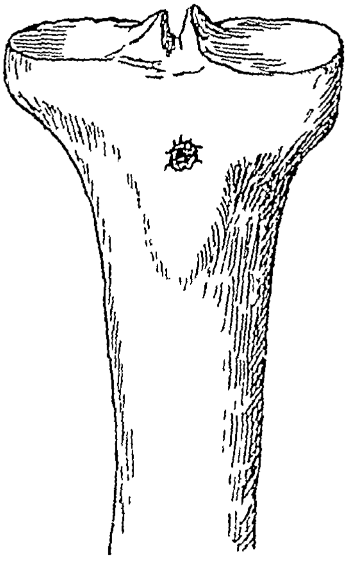

Fig 6

Fig 6 shows a perforating wound of the tibia, sketched from one of Dr La Garde's specimens

Fig 7 is from one of Delorme's illustrations Both show the singular perforating power of the new bullet

In contrast with these, we may illustrate the "explosive effect" of the old 58 projectile The cut is a diagram rather than a portrait of any one case, but it shows the effect which we so often saw in battle during the days of the 58-caliber gun The cut represents by a shaded strip the track of the bullet through the condyles of the femur, and the appearance of the condyle if we suppose the fragments to be all replaced in position As a matter of fact, however, they all lay loose in the capsule in the form of a great double handful of bone gravel, constituting a frightful injury

In future fighting, most of the wounds will occur at the perforating, and not at the shattering distance, so that field surgery will have to deal with new conditions

1 The wounds being smaller and less shattering, shock will be less and the missile will generally go through the body, and not require to be extracted

2 The bullet being so small will have much less tendency to carry in with it patches of septic clothing and skin, and any bits that are lodged in the track of the wound will be so minute that a deep flushing of the wound with antiseptics will often sterilize the injury

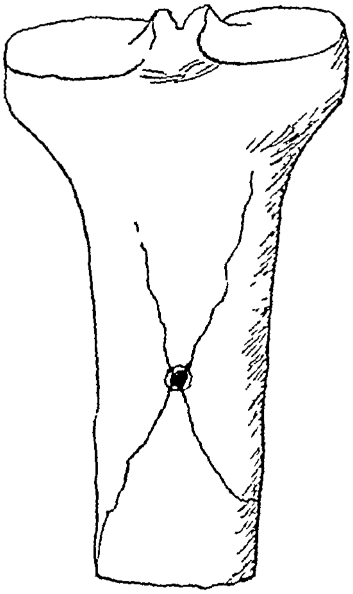

Fig 7

3 In cases where there is actually some chipping of a joint surface it will be possible to open the joint on the field, pick out the fragments, sterilize the cavity and close it up, thus avoiding amputation

4 It will in future be possible to avoid a large portion of the amputations and excisions, which were formerly necessary

5 In perforating wounds of the abdomen, the tearing of the hollow viscera will be much diminished, giving a hopeful opportunity to save life by laparotomy on the field

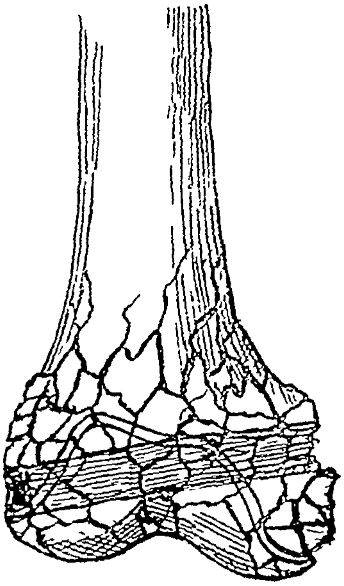

Fig 8

6 As prompt antisepticism of the wounds will be important, the hospital corps will have to be instructed how to do it before they bring in the patient

7 The dispersion of the wounded over wide areas will increase the difficulty of prompt "first aid "

8 Field surgery will be more scientific, and require a greater variety of operations, hence the poverty stricken little cluster of instruments formerly furnished by the Government to field surgeons must have additions adapted to the new exigencies of the battle-field

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MEDICAL EDUCATION

BY HENRY M LYMAN, A M , M D

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The present is a time of evolution and change in the methods of medical education The country has outgrown the old system which was the best that could be provided for the hungry boys who could hardly keep soul and body together during a term of sixteen weeks of exclusion from the maternal pantry Thus far the progress that has been made is in the way of real improvement It might have been much more rapidly effected had the pecuniary endowments of medical education been established upon a broader foundation, but, taking everything into consideration, the teachers of medicine throughout the country have accomplished all that with their limited resources was possible We have reached the point where eight or nine months' sessions are required at the leading medical schools, and four years of study are requisite for graduation The next step in advance will consist in the enforcement of attendance upon four courses of medical lectures delivered during the four consecutive years of medical study This arrangement will render it possible to adopt a course of study that shall be complete and easy of apprehension, instead of the unphilosophical curriculum covering only three years, during the second year of which the belabored student is struggling to finish his preparation in the elementary branches, and at the same time striving to cope with the advanced subjects for which he is not sufficiently equipped

But with the adoption of the four-year course, no such helterskelter method need be followed The first two years should be devoted to the study of the science of medicine, and the last two years to the art of medicine The great object during the first two years should be the acquisition of a sufficient practical acquaintance with that body of classified knowledge which we now possess regarding the structure and functions of the body, and the active agents that modify that structure and function in health and disease For this purpose the student should be carefully trained to use his powers of observation in the dissecting room and in the laboratories, where histology, physiology, chemistry, medical physics, bacteriology and materia medica are taught This will consume the working time of two full years Inasmuch as many of these subjects are admirably taught in the literary colleges and scientific schools of the country, the graduates of such schools and colleges may very properly be admitted to the second year of the medical course This is additionally desirable for the purpose of attracting to the medical profession many highly educated young men who might be repelled by a requirement that they must spend a year in reviewing what they have already sufficiently studied

Having thus completed two years in the study of the elementary branches, the student should be examined, and only if duly qualified, should he be permitted to advance to the study of the art of medicine Progressing in the philosophical order he should now be made acquainted with the visible and tangible forms of injury and disease In other words he should begin the study of surgery This should be taught in all its branches, including the principles of surgery, injuries, skin and venereal diseases, eye and ear diseases, surgical diseases of the respiratory passages Obstetrics may now be fittingly taken up, and the principles of medicine should receive attention Finally, those topics which require the largest experience, observation and power of intellectual discrimination should engage the attention These are the practice of medicine and surgery, gynecology, medical jurisprudence, state medicine, mental diseases and therapeutics The following schedule will readily exhibit this classified arrangement of subjects

FIRST YEAR

Anatomy,
Physiology,
Histology,
Chemistry,
Medical Physics,
Materia Medica,
Dissections

SECOND YEAR

Anatomy,
Physiology,
Bacteriology,
Chemistry
Toxicology,
Hygiene and Climatology,
Dissections

THIRD YEAR

Principles of Surgery,
Pathological Anatomy,
Eye and Ear Diseases,
Therapeutics,
Dental Pathology,
Principles of Medicine,
Skin and Venereal Diseases
Orthopedic Surgery,
Surgical Diseases of the Respiratory Passages,
Physical Diagnosis

FOURTH YEAR

Practice of Surgery,
Gynecology
Mental Diseases,
Medical Jurisprudence,
Practice of Medicine,
Nervous Diseases,
Therapeutics,
State Medicine

But even the most scientific classification of medical studies will avail little if the method of instruction be faulty The day has gone by when medical students could become learned physicians by absorption of knowledge from the atmosphere of a lecture room that had been impregnated by the breath of an eloquent professor Like all other students, medical students must acquire knowledge for themselves by diligent work in the laboratory and recitation room During the first and second years the greater part of the time should be passed in the dissecting room, in the chemical laboratory, in the laboratories of histology, bacteriology and pharmacy Instead of considering their duty fully performed by a voluble description of the sphenoid bone, or a dissertation upon the functions of the supra renal capsules, the professors should be sparing of lectures, and should confine their didactic efforts to the demonstration of such objects and experiments as can not be readily performed by the students themselves With each professor should be associated a sufficient number of tutors whose office should be the hearing of regular recitations upon the topics assigned by each chair Every student should be required to attend these recitations, just as if he were a freshman or a sophomore in a literary college In this way, accuracy of knowledge will be insured for the student, and for the tutor experience in the art of teaching At the end of two years, if his examinations are satisfactory, the student may be allowed to commence the study of the art of medicine During the next two years instruction by recitation should be continued by the tutorial staff, while the professors of each department should confine themselves chiefly to the supervising of the work of their subordinates, and to clinical instruction of their classes in the clinical amphitheater or at the bedside At the end of the third year the qualifications of the class should be fully ascertained, and no one should be permitted to enter the graduating class in the fourth year until he has given satisfactory evidence of sufficient preparation for such candidacy In this way it will become possible to avoid many of the ruinous disappointments which now occur, when all sorts of loose fish are coaxed into the graduating net only to be rejected at the final examination The sifting of students should precede their matriculation, and should be continued during the whole of their course, instead of being postponed till the final examination, leaving the unfortunate dullard in ignorance of his fate till time and money have irrevocably vanished, with nothing to show in exchange for the sacrifice

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A REMINISCENCE OF THE NICARAGUAN FILIBUSTERS

BY L C LANE, M D

SAN FRANCISCO

Aceptó con qusto la leche queso y pan de maiz que le ofrecieron mientras él devoraba estos manjares, ocupado esclusivamente en satisfacer la primera necesidad de la naturaloza, no se caraba de modo alguno de sus discursos

(He accepted with pleasure the milk, corn bread and cheese which they offered him and while he ate this food occupied wholly in satisfying the first wants of nature he took no heed of their discourse)—From Campo Alange s Novela Pamplona y Elizondo

When an Assistant Surgeon in the United States Navy, in 1858, and connected with the sloop of war *Decatur*, the writer was on the western coast of Central America, at the close of General Walker's invasion of Nicaragua The older reader will remember this freebooting expedition, which was composed of bold, reckless, fearless and unscrupulous fortune hunters, and whose operations, as was evident to the writer, had the sanction of President Buchanan's administration, and the aid of the Navy, as far as it was possible to go without arousing international suspicions And in this movement the sloops of war *Decatur* and *St Mary*, and frigate *Merrimac*, so famous afterward in the Confederate service, quietly acted their respective parts These vessels were moving from port to port for the purpose of aiding or protecting Americans who might be found in distress

On the arrival of the *Decatur* at Punta Arenas, the Pacific port of Costa Rica, our commander was informed that a body of American filibusters, who had been conquered by the Costa Ricans, were held as prisoners at that place These men were young, few of them had reached the age of 30 years, they were half naked and of cadaverous paleness, for in their blood, to an undue measure, the leucocyte had replaced the red globule As prisoners, they were fed by the Costa Rican Government, and for this purpose were provided for in the manner which the robber would usually receive from him whom he had failed to rob, viz they were each given a dime a day with which a sufficiency of bread, bananas and plantains could be purchased to stave off, or rather prolong, starvation And as dessert, each evening their eyes feasted on a sunset picture unequaled by nature or painter in Italy It is probable that in that scene of sublimity, cloud-forms tinted with opal, amber and rose, did little towards appeasing the fierce qualms which tormented those starvelings

The predominating diseases of these men, apart from numerous minor lesions received in sacrificing to Venus, were malarial fever and an ulcer of peculiar and unusual characteristics

The fever was of remittent or intermittent type, and was much milder in form than that which occurs at the North in the robust subject who has been exposed to malarial influence From the writer's observation every white immigrant from the temperate zone to Central America soon fell a victim to this fever After a few years' residence there they became emaciated, bloodless and spiritless A few succumbed at once and died soon after arriving in the country A Minister to Guatemala from the United States died in two weeks after reaching his destination To live there the Northerner must be provided with quinin, and from time to time, take enough to counterpoise the malarial poison with which he is becoming saturated

The ulcers with which the filibusters were affected were seated chiefly on the arms and legs, and their causation and commencement were to be found in some lesion which was of a trivial nature, for example, the prick of a thorn, the bite of an insect, and in a few cases the wound had arisen from a knife-thrust or gunshot missile In the Central American forest one encounters at every step trailing vines and shrubs which are armed with small spines or thorns, the contact with which lacerates the skin And in these men such wounds quickly enlarged, and assumed the form of an unhealing ulcer

These ulcers presented characters which the writer has not seen elsewhere They consisted of half-formed tissue which, in the exuberance of its growth rose two or three lines above the adjacent surface They were of a pale yellow color, and so non-vascular that when touched they did not bleed This pseudo-formation differed widely from any form of granulative tissue, and in appearance it resembled a thick emulsion rather than an organized animal tissue In fact, it was a new type of structure, so low in organization that it was the analogue of a fungoid plant, and was no more sentient than the latter This fungoid neoplasm had arisen in the human body that was saturated with malarial poison, half starved and living on a non-nitrogenous food

The commander of the *Decatur* gave orders that a few of these men who were in the worst condition should be taken on board and cared for A small number were selected, and were given treatment Little was done except to place them on the man-of-war's rations, and under this improved regimen, and simple cleanliness, the ulcers vanished like magic These cases afford an illustration that food and not medicine may give health to the sick, reversing the initial sentence of Celsus

Of the men who were left ashore in Punta Arenas, a considerable company took a large boat and came alongside of the *Decatur*, hoping thus they would also be received When denied permission, these men indulged in profane comments against our commander and the United States, in the form of studied curses which would have shocked even ears which had become obtuse to marine blasphemy Volleys of imprecations were heard which reverberated back from the neighboring Cordilleras, and, borrowing the words of the Homeric Muse, they resembled that shout

> "That moved Heaven's concave and above
> Shook the fixed splendors of the throne of Jove"

Or perhaps their action were better expressed in the words of Virgil's suppliant "*Flectere si nequeo superos Acheronto movebo*"—(If I can not move heaven I will try hell)

The men who remained at Punta Arenas, after a longer or shorter sojourn, either died or managed to escape, and in their invasion of Nicaragua they learned, or taught others, the lesson of the embarrassment which may beset the attempt to conquer a Central American republic, and that the latter, though weak in military resources, has numerous other allies in the pricking thorn, the stinging ant, the chigoe, the vertical sun-ray, and of potency equal to these, the atypical ulcer and the microphyte of malarial poison

TREATMENT OF SEA SICKNESS

BY M CHARTERIS, M D

PROFESSOR OF THERAPEUTICS AND MATERIA MEDICA IN UNIVERSITY OF GLASGOW, SCOTLAND

SEA VOYAGES

Sea life is not new to me I commenced my professional career by acting for nearly two years as Surgeon in the Peninsular and Oriental Company's service, and my autumnal holiday since then has never appeared to me to be satisfactory or complete, unless part of it has been spent on board ship

I never was seasick I love the sea in its calm and pleasant mood, when the waves lazily lap the steamer with the kiss of friendship, and I am not distressed when they turn upon it as an intruder and lashed by the fury of a storm seek to bury it in the ocean's depths In all its moods, bright or dark, the sea has for me a wonderful charm, for I admire its vastness, its grandeur, and its boundless power, except when the fog horn is heard or an iceberg looms in sight

So when I had the honor of being placed upon the Advisory Council of the Medico Climatological Section of this great Exposition I elected to address you upon a subject with which I was very familiar—sea voyages

INFLUENCE OF A SEA VOYAGE IN CERTAIN DISEASES

The sea atmosphere has certain marked features It is pure, it is equable There is freedom from the risk of chills when on deck Day by day the traveler breathes in saline particles abundance of ozone, a slight quantity of bromin and iodin, and all these tend to have a salutary action on the general system By increased appetite and good digestion the health improves, and this improvement is manifested by gain in weight, by a better color, and by more bodily vigor

In causing increase in weight, the ocean climate surpasses all others, and it is not uncommon in a long voyage to find that a man increases more than fourteen pounds in weight

In what cases, then, is a sea voyage to be recommended?

We would answer this inquiry by stating

1 That it is very serviceable in certain pulmonary affections The moist atmosphere does good in chronic bronchitis with little expectoration, for it tends then to relieve the dry cough by relaxing the bronchial tubes

In chronic pleurisy it appears to facilitate absorption and in chronic empyema it effects a marvelous change Empyematous patients have embarked with drainage tubes in their chests and in the course of the voyage the discharge gradually ceases, and the cavity granulates up sufficiently to allow of the removal of the tube

The late Dr Walshe stated "A sea voyage, especially in the case of young adult males, will occasionally work more effectual change in the phthisical organism, than any other single influence, or any combination of influences with which I am acquainted " The experience of many observers has confirmed this opinion, and it is now an acknowledged fact that the progress of tubercular mischief in the early stage can be completely arrested by a timely and prolonged voyage

Experience has also shown that a voyage does good in cases of phthisis when there is a single cavity without great local irritation, and that it is very beneficial in that form of phthisis which is seen with *scrofula*

2 A sea voyage operates like a charm in the case of patients recovering from acute dysentery, and in aiding convalescence from an acute inflammatory affection The recuperative efforts of nature are then assisted by the exceptional advantages of an unsurpassed atmosphere and by an improved digestion So, also, in the various sequelæ of influenza, a sea voyage is unquestionably a better remedial agent than any drug or combination of drugs that can be prescribed

3 In chronic Bright's disease, if it be not marked by much loss of albumen, the regular diet at sea, the systematic exercise on deck, the impossibility of any chill being caught there, combine to make conditions which render recovery more possible than any residence on land can effect

4 Above all, a sea voyage is the unquestioned cure for nervous derangements which result from over work and are attended with sleeplessness In a voyage there is leisured recreation There is an unequalled holiday There are no business cares and no professional worries There is complete physical rest which in the end brings gradually but surely mental repose Soothed by the breezes of the ocean, a tired man, professional or mercantile, acquires a new physique, while real or fancied ailments disappear under a tonic which art can never supply

THE GREAT DISADVANTAGE IN SEA VOYAGES IS SEA SICKNESS —ITS NATURE AND SYMPTOMS

In these, and other diseases mentioned, physicians recognize that the sea air and the mode of living at sea are potent therapeutic agents Yet many physicians justly hesitate to recommend its adoption and many patients, even if it be recommended, hesitate to undertake a voyage, from dread of the familiar physical disturbances associated with the sea

In advising a voyage, sea sickness can not be ignored, and unconquerable sea sickness is acknowledged by authorities to be a circumstance counter-indicating a sea voyage So, also, is a tendency to hemorrhage

We will show, at a later stage, that these contra-indications no longer apply, and give proofs of our statement

Meanwhile, we may digress for a little and ask, What is the history of mal de mer, in general literature and professional, and what means have been suggested to ward off an attack or to give relief from it if it has begun?

If we turn to general literature we find that among ancient authors, Plutarch first alluded to it Cicero, also, in feeling language told his experience, and resolved that he would rather fall into the hands of an executioner, than again pass through the same ordeal

The author of "Tristram Shandy" very happily and very racily described its depressing cerebral effects, and Shakespeare in inimitable words mentions "the quite, quite down feeling" While Browning terms it, "the swooning sickness on the dismal sea"

No extensive bibliography in medical literature exists on the subject, and we only find descriptions of its nature and treatment in scattered pamphlets

There can, however, be little doubt of the "quite, quite down feeling" with which it begins, and which culminates after more or less prolonged intervals in vomiting as a rule, at first, with little effort The stomach must be emptied and its contents are evacuated, with little regard to time or place or to appropriate receptacles conspicuously evident on the deck or in the cabins of the steamer

This may be termed the first stage of sea sickness, and is followed in many cases by a *second* stage, when the vomiting is succeeded by retching and by great physical and mental prostration The afflicted person, no longer able to maintain the erect position, lies half asleep, half awake, dozes and dreams and the dreams are not pleasant

Many explanations have been offered in later years f the nature of these symptoms, some of these proceeding from men who have had some experience of the sea, or from men who have had no experience at all

With the latter we have nothing to do, but with regard to the former we may say that the controversy ranges between advocates of the central origin of sea sickness in the vomiting center in the medulla, and those who contend for a stomachic origin The latter origin certainly accounts for the nausea and the vomiting in the great majority of cases, and for the shortness of the attack Thus an infant at sea becomes sick, but when vomiting takes place the sickness is over A steerage passenger becomes sick but in the course of twenty-four hours the sickness is gone, and there is no after depression or retching A cabin passenger is more affected than a steerage passenger but yet, as a rule, he is able in the course of two days to take his seat at meals

Yet we know that with a few passengers the ordeal is severe and protracted, and that recovery only takes place at the end of seven or eight days The irritation of the stomach here does not explain the prolonged period of their illness, and we can only account for it by supposing that the stomach disturbance has given rise to reflex action, which implicates the medulla and the whole cerebro-spinal system Hence the indescribable misery of the wretched sufferer who, at this period, would often welcome death as a glad relief

This attack of the whole cerebro-spinal system is most apparent, to use an American expression, in "brainy" people, whose nervous organization is highly strung, and whose mental activity is great

We must also concede that in some cases the irritation proceeds from the brain, as a whole, for we know that the very thought of going to sea may occasion a peculiar terror, which is followed by headache, distress and an over-mastering weakness

Henry Ward Beecher, the great American pulpit orator, relates that, "many years after his first voyage across the Atlantic, he heard some sailors in a Brooklyn dock singing the same old 'Chanty Song' that he had heard when ill at sea, and that the mere listening to it produced the creepy feeling of sea sickness"

So, also, a boatswain's whistle, by an association of ideas arouses in certain individuals unpleasant sensations, and some naval officers feel remarkably queer, on the reception of orders to proceed to sea

Three years ago, when standing on the deck of the little steamer, which was about to start from Penzance in Cornwall, to the Scilly Islands, I observed a very striking instance of this cerebral irritation A cab drove hurriedly up to the pier and from it alighted a lady and a gentleman The moment the lady saw the steamer she became pale, staggered and caught the gentleman's arm, and could be induced by no persuasion or coaxing to step on board

If we consider this, and other evidence which might be adduced, we are forced to the conclusion that the causation of sea sickness is complex We contend however

1 That the vomiting is due to gastric irritation proceeding from the stomach

2 That the retching and mental depression indicate the further implication of the whole cerebro-spinal system

3 That in exceptional cases, it depends primarily on cerebral causes

REMEDIES TRIED IN SEA SICKNESS

We have spoken of how sea sickness is mentioned in general literature, and we also find in this literature some allusions as to its cure Bacon extolled a liver pad and Shakespeare tells in "Cymbeline," how the fair heroine, "Imogen," before she proceeded to seek out her lover in Italy, received from her attendant a certain cordial "If you are sick at sea," he said, "a dram of this will drive away all distemper"

She did not proceed to sea, but when wearied by troubles on land she remembered the advice and took the cordial, and she fell into a sleep so deep and so lasting that it simulated death Doubtless it contained some narcotic, but what this was the great dramatist does not reveal

Some cures advocated we find to be nothing short of heroic Long ago green midshipmen in the English navy had a rope's end applied to them, and sea sick men on board whaling vessels had buckets of salt water dashed over them

Boys on board training ships when sick were supported in each case by two other persons, and had to walk the deck and swallow occasionally spoonfuls of hot soup until they got well In medical literature we read of many remedies, but we shall only mention a few of these Dr John Chapman of Paris, attributes the malady to cerebro spinal congestion, and recommends an ice bag to be applied to the spine Cocain, nitrite of amyl, nitro glycerin and antipyrin have each had their advocates, but experience has proved their action to be evanescent

The vomiting is often allayed by lying down and by swallowing small quantities of iced champagne, but the same thing can not be said of brandy and soda water, which only tends to heighten the gastric irritability

In the last few years there has been a growing belief in the administration of sedatives, with the object of securing rest and sleep, and this indeed is the only true and rational method of treatment, for it strikes at the root of the malady in the *second* stage Sleep gives rest to the mind amid the worries of life on land, and in allaying the troubles of the sea its action is no less efficacious

But with most drugs employed, sleep so desirable can only be obtained under such manifest disadvantages that their use at sea is forbidden Opium secures sleep, but as on land so also at sea, the patient awakes with furred tongue and loss of appetite

The hypodermic injection of morphin induces sleep, but when injected in a case of sea sickness it often appears to intensify the gastric irritability and to increase the vomiting

Hydrate of chloral, though it produces sleep has, as is well known, when administered in any disease a depressing influence on the heart, accordingly since in sea sickness the action of the heart is weak, and the general system is not in its normal condition, one can have no hesitation in affirming that its use in such cases would be hazardous in the extreme

Paraldehyd is undoubtedly a safe and valuable hypnotic, but its nauseous taste and its persistent odor render it useless in sea sickness

Sulphonal is out of court for this malady, because of the length of time which elapses before its hypnotic influence is exerted, and because the patient, who has used the drug has on awaking from sleep, an unsteady gait coupled with general confusion of ideas

In fact, the only hypnotic we can safely employ in sea sickness is bromid of potassium, but when it is given in a hypnotic dose of 30 grains it is often immediately rejected by the stomach Yet when retained it is a most efficient remedy, and where its bitter taste has been effectually disguised I have observed distinct benefit to follow from its administration

I may here interrupt my remarks to observe that it has been vaunted as a prophylactic in sea sickness, especially by Beard of Boston He recommends its administration for some days before going on board, in such doses that its physiologic action—bromism—should be established But bromism is associated with mental incapacity, and the passenger thus half asleep and half awake, unable to look after his own affairs or to converse with ship officers or friends, would be a spectacle for gods and men The cure would be worse than the disease, and therefore we think as a prophylactic in such doses bromid of potassium can not be recommended

I have said that bromid of potassium, when retained had, in the experience of others and of myself, been found to be an efficient remedy, and my reflections upon this efficacy led me to consider in what manner its sedative influence could be enhanced by another hypnotic at once potent and safe

CHLORALAMID

I satisfied myself by asylum, by hospital and by private practice that chloralamid had all the advantages and none of the disadvantages of hydrate of chloral It secures sleep by its action on the cerebral cortex and has but slight influence on other parts of the nervous system of voluntary life It has no direct action upon the heart or circulation It does not reduce arterial pressure and its administration is not attended with any disorders of digestion or with any depression

I found also it could be rendered soluble in certain proportions by rectified spirits, and that this solution was not altered by the addition of bromid of potassium

The attention of the makers of chloralamid was drawn to these facts, and subsequently Messrs Burgoyne & Co , London, submitted to me a solution termed

CHLOROBROM

which contained in each ounce 30 grains of chloralamid and 30 grains of bromid of potassium, with other ingredients which assisted their action and made the taste pleasant

In my own country this solution has been extensively tried in asylum practice during the last twelve months, and the trials have been eminently satisfactory in various forms of mental disease, notably in melancholia and in the insomnia brought on by overwork

This solution is stable, palatable, potent and safe, and as evidencing its safety it may be stated that 18 drachms have been given to an asylum patient suffering from aortic incompetency, and with no bad results

TESTIMONY OF SHIP SURGEONS AS TO THE EFFICACY OF CHLOROBROM IN SEA SICKNESS

In the autumn of 1891 I had opportunities in a trip across the Atlantic of testing chlorobrom, and I found that when vomiting had been succeeded by retching, its effects were speedily manifested When administered at this point it was in no case rejected and after a dose varying from six to four drachms, sleep which lasted from six to eight hours, invariably followed To make assurance doubly sure, it was submitted for trial to ship surgeons who had charge of steamers sailing from Great Britain to various ports

I have before me evidence and reports of fully 100 cases where it was tried in the *second* stage of sea sickness These all show that its action is most satisfactory, that it possesses the inestimable advantage of being retained by the stomach, that it insures sleep of six or eight hours duration and that it leaves the patient free from headache and possessed of a good appetite The dose administered was in the quantity mentioned, in six to four drachms, but this quantity may, I consider, be judiciously divided so that a teaspoonful may be taken every five minutes When the retching is very severe this division appears to be preferable

It seems to be unnecessary to give the reports in full, and I shall content myself by submitting one from Dr Macdonald of the Anchor Line Service, which was published in the *British Medical Journal* of September, 1892

"After a series of careful trials, extending over two voyages to and from New York, I can testify to the efficiency of chlorobrom in cases of sea sickness During my experience at sea, I have prescribed almost every reputed remedy, including cocain, antipyrin, nitro-glycerin, quinin, etc, but with insufficient and uncertain results in most cases

"Of late it has been my custom to prescribe a mixture of bromid of potassium and spirits of chloroform, this I found to be of considerable service, but unfortunately like most remedies administered by the mouth it was exceedingly liable to be rejected by the stomach

'Chlorobrom, however to my knowledge has never been rejected, and has seldom failed to relieve the gastric disturbance and nausea It produced sleep from which the patient awoke with a clear head, a good appetite, and remarkable freedom from most symptoms which were so painfully evident prior to the administration of the solution Its perfect safety, agreeable taste, and freedom from disagreeable after effects, all combine to render it an admirable preparation and an ideal sedative

"As illustrating the benefit from its use I select one case, when *mal de mer* was complicated with a history of gastric ulcer Unless the solution had been retained I believe there would have been great danger of perforation of the wall of the stomach from the excessive retching

"On the second day after leaving port, I was called to see Miss C, age 22, and found she had been very sick since the steamer started There was continuous retching with headache, sleeplessness and great depression She was markedly anemic and very weak The peculiar "coffee ground" appearance of the vomited matter attracted my attention and I found that the patient had for two years been under treatment for gastric ulcer

"I immediately administered half an ounce of chlorobrom which was retained, and in twenty minutes secured a sound sleep, which lasted for eight hours

"At frequent intervals fluid nourishment was subsequently given, with finely chopped ice and small doses of chlorobrom There was no return of nausea or retching After two days she was able to be moved on deck, and she continued to improve in her general health until the end of the voyage"

EFFICACY OF CHLOROBROM IN SHORT VOYAGES

I have also here, reports as to its efficiency in short voyages of ten to twelve hours duration, when these voyages were made by the night service of steamers In such cases the following directions to secure its prophylactic effect must be rigorously observed by the passenger

1 Unload the primæ viæ by taking for two successive nights, previous to going on board, an antibilious pill or a tamarindien lozenge

2 When on board take no food but at once seek the sleeping berth, undress and take, in the case of a male, a tablespoonful and a half, and in the case of a female a tablespoonful of the solution There follows a sound sleep from which the passenger awakes refreshed when the steamer is in sight of land

The effects of this treatment are illustrated by the following details from two medical friends—the voyage of one being from Leith to Hamburg, and the voyage of the other from Glasgow to Shetland

"Before crossing from Leith to Hamburg, I thought I would stave off my inveterate enemy—sea sickness—by following your advice and taking with me chlorobrom I took for two nights previous to going on board a podophyllin pill, and when I embarked on board the steamer at 8 P M, I went straight to my berth, and took a full dose of chlorobrom—one ounce I slept soundly I rose the next morning with a good appetite and never missed a meal although the steamer pitched a good deal I may mention that I have crossed twice to New York, and three times to Hamburg, and without exception have been badly sick each time I also gave some of the solution to a fellow-passenger and he writes, 'Having taken upon your recommendation two doses, I am able to declare that, although usually unwell under similar conditions, I have escaped sea sickness, have enjoyed my food and have slept as soundly as in my own bed'

"The supply of the solution was limited, and the bottle was empty when I returned from Hamburg three weeks afterwards The sea was no rougher than on the previous trip yet I was very sick I could eat nothing I vomited a great deal of bilious matter and afterwards had severe retching

"Having suffered severely in my passage from Glasgow to Shetland I was glad to make a trial of chlorobrom this year Two nights before embarking I took a pill of podophyllin and mercury, and then on board 6 drachms of the solution The tossing was sufficient to wake me several times, but on such occasions I experienced for a few minutes an exquisitely pleasurable sensation of repose, which the rocking of the steamer seemed rather to enhance and then fell asleep again A lady who made use of chlorobrom on the same voyage, stated to me, that she positively enjoyed the rolling of the steamer As we entered the Firth of Forth I rose, and enjoyed a substantial breakfast On my return journey I tried the solution with equally satisfactory results"

EFFICACY OF CHLOROBROM IN CASES OF HEMORRHAGIC PHTHISIS AND IN CASES OF UNCONTROLLABLE SEA SICKNESS

All authorities agree in stating that a tendency to hemorrhage or unconquerable sea sickness are conditions which counter-indicate a sea voyage, and in a paper read at the medico climatological meeting in Denver, I also referred to these as serious obstacles

But now I consider these obstacles can be overcome by prudent advice and judicious treatment As bearing upon hemorrhage the following case is worthy of note

A young gentleman consulted me January, 1892 There was slight dullness at the apex of the left lung, and on three occasions he had suffered from severe hemoptysis Circumstances prevented his going to any health resort at a high altitude, but he stated he would be able to take a sea voyage of considerable length Now before knowing how sea sickness could be done away with, I would have hesitated to recommend this, owing to the risk accruing from its occurrence, but with the experience since gained I had no difficulty in telling him his plan would be advantageous He was told what to do and by strictly obeying the injunctions laid down, he was able to pass through the Bay of Biscay perfectly free from *mal de mer*

Unconquerable Sea Sickness—In the autumn of last year I was consulted by a gentleman whose dread of the sea, gained by an experience of two voyages to New York, was very great He was obliged again to cross the Atlantic, and told me he would rather face a certain personage than endure the sufferings he had encountered, for in his two previous voyages he had never been able to leave his cabin I assured him that he might undertake the passage with perfect confidence, provided he obeyed the injunctions I laid down On his return to Britain he sent me the following communication

"Previous to embarking I took two anti-bilious pills and in the evening before leaving Moville I took 6 drachms of chlorobrom I slept quite soundly and rose the next morning with a good appetite and with no headache On the second night I repeated the dose and although the weather was extremely severe I suffered in no way, but enjoyed the voyage immensely I had an opportunity in our passage out, of giving some to a lady passenger who was afflicted with headache, nausea and sleeplessness This secured her a refreshing sleep, and the headache and nausea disappeared

"I used the solution on my return voyage with the same good effects The solution is very palatable and easily taken"

THE SURGERY OF THE URETERS A CLINICAL, LITERARY AND EXPERIMENTAL RESEARCH

Read in the Section on Surgery and Anatomy at the Forty fourth Annual Meeting of the American Medical Association June 8, 1893

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(Concluded from page 916)

The Writer's Plastic Methods for Making a Vesical Diverticulum —When the ureter has been injured in intra abdominal operations in such a way that the duct can not be there implanted into the bladder, or when morbid processes are found to have brought about the same result, I would recommend strongly the following procedure

1 Implant the ureter upon the skin of the abdomen in the median line as near the bladder as possible Close the abdominal walls as usual, except for the presence of the ureter

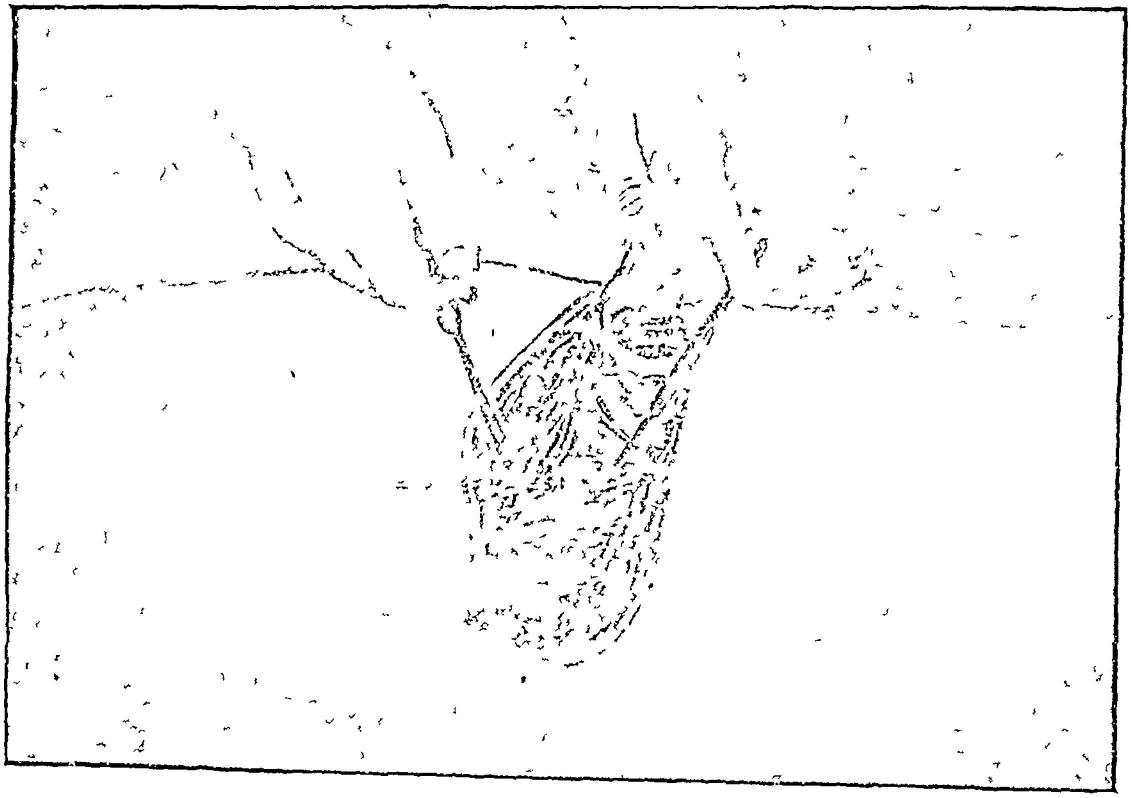

Fig 3—Cadaver lying on the left side Incision made to expose the ureter, which is seen upon the hook at the right

2 When the patient has fully recovered from the primary operation, open the structures composing the abdominal wall between the ureter *and the* pubes *down to the* peritoneum and bladder The peritoneum must not be opened The bladder may be distended and raised exactly as in supra-pubic cystotomy

3 Make two incisions in the bladder parallel to the median line, beginning as near as possible to the peritoneum without prejudice to its integrity, carry them down at a distance of about 15 mm apart towards the neck of the bladder under guidance of the finger With scissors curved on the flat the two incisions are now united at the lowest point and hemorrhage is controlled with pressure forceps It will be seen that we now have at our disposal a vesical flap of considerable extent hinged above by a nutrient pedicle

4 The ureter is loosened from the skin and brought well down towards the flap which is simultaneously raised to meet it The vesical flap is firmly fastened back in its new position by catgut sutures passing through the neighboring muscles or fascia, and the end of the ureter is held in position by light catgut sutures which pass through loose periureteral connective tissue, if possible, and through the muscular structures near at hand

5 We are now in position to sew together the edges of the flap to form a tube, into the upper end of which the ureter is introduced, and to carry a similar row of light catgut sutures down the bladder wound itself The lower angle of the vesical opening would best be left open for the sake of drainage It will in all probability cause no trouble in healing The upper part of the skin wound together with the fasciæ may be closed Under careful antiseptic treatment this procedure ought to be as practicable and as easy as the majority of operations daily undertaken

I have practiced the method only upon the cadaver Fig. 8 shows the appearance of the parts after the flap is dissected up from the bladder In this subject, a female of medium height, the distance from the pubes to the umbilicus was 17 cm , from the pubes to the peritoneal reflection upon the bladder, 5 cm , from the pubes to the upper end of the vesical flap, 10 cm *Hence we may safely say that without opening the peritoneum the bladder can be plastically extended to meet the ureter, when that duct is brought out upon the abdomen at any point more than 8 cm , (about three and one-fourth inches) inferior to the umbilicus*

This is not, however, the limit of such plastic procedures upon the bladder For, if the peritoneum is opened, the flap can be considerably increased in size The ureteral fistula having been established as before, as low down as possible the secondary operation is begun by (1) making an incision to expose the attachment of the peritoneum to bladder, (2) the peritoneum will then be opened transversely at or very near its vesical reflection, and fastened by some points of catgut suture (or by a continuous suture) to the fundus of the bladder as far back as possible In other words, the peritoneum is transplanted backward upon the bladder The point to which the peritoneum is transplanted must be marked by a silk suture, with ends left long if the operation is not completed at once The remainder of the procedure may be performed at once if the urine is aseptic, and if the peritoneum has been well fastened down to the base of the bladder If these conditions are absent, the final steps may be deferred some days The remainder of the operation is the same as that already described except that the peritoneum being farther back, a much larger flap can be secured Experiment upon the cadaver convinced me that with care the *bladder flap may by opening the peritoneum, be made to meet* *the ureter at any point one inch (2 5 cm) or more below the umbilicus*

This operation has the following advantages

1 The normal relations of kidney and bladder are restored

2 It is entirely safe, the technique annulling the dangers of peritonitis from the urine, if septic

3 The bladder can be utilized by plastic procedure to make good a defect of several inches in the ureter

4 No other viscus than those at first implicated is called upon to make good the loss

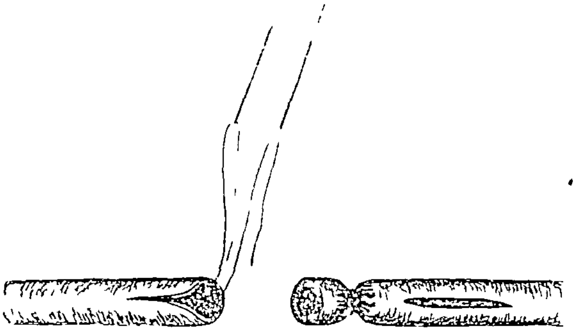

Fig 4 —The suture armed with two needles holding the upper end of the ureter in its loop

Symphyseotomy for exposure of the bladder to operation naturally suggests itself, since the attention of surgeons has been called to this method of reaching pelvic organs and of increasing intra-pelvic space It has been formally proposed as a method of gaining access to the bladder by Wickhoff [76] The bladder distended with six to twelve ounces of water, may be brought into view and be made easily accessible when the symphysis is divided The harmlessness of the procedure when carefully performed would render it justifiable as a preliminary step in the writer's methods of making a vesical diverticulum to meet a shortened ureter

Rydygier's Method —An ingenious method of extra-peritoneal ureteroplasty was suggested by Ludwig Rydygier [61] He advises that in cases of injury to the ureter during surgical operations, the two ends of the ureter be brought out through the abdominal wall and the wall be allowed to close about them He would then prepare for the urine an artificial channel of skin by making two parallel incisions between the two openings, suturing together the edges of the isolated piece of skin so as to form a tube and depressing this tube by sewing over it the severed edges of skin drawn from each side

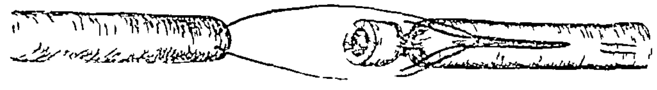

Fig 5 —The needles passed down the ureter through the slit and emerging from the ureteral wall

The theoretical possibility of success by this method can not be doubted For just as Rosenberg,[53] has shown that intestinal mucous membrane is speedily replaced by bladder epithelium when the bowel is implanted into the bladder, so Bardenheuer [5] has shown that even very large masses of skin when transplanted into the oral cavity can speedily do full duty as mucous membrane by becoming overgrown with the epithelial cells peculiar to the oral mucous membranes We would expect that in a comparatively short time after the turning in of the skin, according to the suggestion of Rydygier, the epithelium of the new tube would gain the essential characters of the ureteral mucous membrane The plausibility of the plan is much diminished, however, when we remember how difficult it would be to overcome the influence of the urinary pressure at the points of desired junction The method might be successful however, by affording abundance of drainage at first, until healing had occurred at all points except those of junction

In a case of this description (i e ,where the two ends of an injured ureter were implanted into the abdominal wall at some distance from one another) the writer suggested the formation of a new channel by implanting into a gutter between the two openings, a labium majus from the same patient It was suggested that if this large piece of double mucous membrane were split after being removed it might be implanted by the Thiersch method and made to serve as mucosa for a new ureter I am not aware that the suggestion was acted upon

Vaginal Plastic Methods —The ureter not infrequently opens congenitally upon the vulva or within the vagina These cases are usually amenable to treatment by making an incision around the orifice of the duct, at a distance from the ureter sufficiently great to leave a piece of mucous membrane attached to the tube The ureter is then dissected back to the extent necessary to enable the operator to readily insert it into the bladder through an incision made for the purpose Such a case is that of McArthur [39] which was entirely cured by this method

The paper of Secheyron [59] upon the abnormal openings of the ureter upon the vulva and in the vagina should be mentioned in this connection

Vaginal plastic methods, applicable when the ureter has been injured in surgical operations especially the modern kolpo-hysterectomy, have been frequently devised and put in practice When the ureter discharges its fluid into the vagina and the duct itself can not be implanted directly into the bladder, two general plans are at our disposal

1 The vaginal wall may be utilized to make a new channel to the bladder

2 The vagina may be closed (kolpokleisis) particularly when the uterus has been extirpated

The first of these plans has been repeatedly utilized and has given satisfactory results The procedure was projected by T A Emmet,[15] in a case in which the mouth of the ureter opened 'on a line with the os uteri" Dr Emmet formed a channel out of vaginal tissue to carry the urine from the mouth of the ureter to a point well beneath the bladder, intending to turn the new opening of urinary discharge into the bladder by a temporary vesico-vaginal fistula The first part of the plan, the making of a new duct, was carried out without difficulty but the patient died of pneumonia in the interval between this and the final procedure

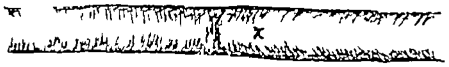

Fig 6 —The ends of the suture having been used to invaginate the upper in the lower fragment are tied together

Of course the lengthening of the ureter is unnecessary when it discharges into the vagina at a point well under the bladder In this condition a vesico-vaginal fistula is made, and the ureteral opening is turned into the bladder This was successfully accomplished by Dr Wm H Baker of Boston, at the suggestion of Emmet, in a case in which the ureter opened congenitally into the vagina at a point near the urethral meatus

The most interesting communication yet written upon the subject of vaginal ureteral fistulæ comes from Arie Geyl [71] whose work appeared in 1892 He describes minutely a case in which, after a difficult forceps delivery a woman was found to have a fistula of both ureters, on one side emptying into the vagina near the uterus, on the other side discharging into the uterus at some unknown point To get rid of the discharge from the uretero-vaginal fistula, Geyl used a portion of the vagina to form a pouch which he caused to communicate with the bladder by means of a permanent fistula This was readily accomplished by first making a large opening into the bladder from the vagina and then removing an oval strip of vaginal mucous membrane surrounding this opening and the end of the ureter By approximating the denuded surfaces from side to side the uretero-vaginal fistulæ were made to communicate This operation was a success The subsequent attempt to close the uretero uterine fistula failed and the patient declined further interference The uretero vaginal fistula was thus closed by a procedure easier and safer of execution and far more desirable than nephrectomy Baum [4] describes an ingenious procedure by which he succeeded in closing a supernumerary ureter opening into the vagina He opened the bladder supra-pubically, then after incising the base of the bladder freely, he closed the peripheral end of the sacculated ureter thoroughly and stitched the edges of the ureteral dilatation to the edges of the wound in the base of the bladder In other words, he used the sectio alta in order to turn the supernumerary ureter into that viscus

Very interesting recent cases of uretero vaginal fistulæ have been studied by Weil [75] Other cases have since been observed and operated upon, but it is not the purpose of this paper to make more than an allusion to this possibility, which readily does away with one of the commonest excuses for removing the kidney

A ready conclusion from these considerations is to be found in the recommendation which I would unhesitatingly and urgently make to those performing vaginal hysterectomy When a ureter is injured during the course of the operation and the condition is realized, the ureter should be drawn down into the vagina and fastened to the vaginal wall well under the base of the bladder so that a subsequent plastic procedure may cause it to discharge normally It should be covered by mucous membrane

The second method of getting rid of uretero-vaginal fistulæ, by closing the vagina permanently and establishing a vesico vaginal communication, has been applied in several cases It is not objectionable after kolpo-hysterectomy except in those cases in which marital relations would be interfered with by vaginal closure

These two methods are so easily practicable and so nearly devoid of danger in their application that they should wholly supplant the destructive operation of nephrectomy for the relief of this form of ureteral fistula

Urine Discharged Extra-Vesically—It is within the experience of almost every surgeon to have seen cases of ureteral fistulæ discharging upon the skin It is also easily understood that such fistulæ may readily be produced at will, when the ureter has been severed, by simply splitting the ureter slightly to enlarge its external opening and suturing it carefully upon the skin Obviously, care must be taken that the ureter is not too sharply bent upon itself at any point in bringing it out of its natural bed and that it is not compressed by other tissues or organs It is not necessary to mention the many disastrous consequences which might arise as a result of compression in this way The ureter has been purposely brought out upon the abdominal wall in this way, as in the cases of LeDentu[39] and Pozzi[48] Trekaki[68] goes so far as to recommend this operation in tumors of the bladder which compress the lumen of the ureter, in compression of the ureter by inoperable carcinomas and myomas of the ureters or inoperable tumors lying higher in the abdominal cavity He regards partial lesions of the kidneys and not too extensive inflammations of these glands as by no means contra indications for the procedure, but rather as indications, since they are more likely to recover when the urinary pressure is removed He adds also that in complete ruptures of the ureters after a trauma or surgical operation suture of the ureter into the wound is indicated instead of nephrectomy Trekaki supports his opinions by citing two experiments which he has made upon dogs In one of these he sutured both ureters into the lateral abdominal walls On the right side the abdominal wall suppurated and a pyelonephritis arose, on the left, more than five weeks after the operation the kidney was found healthy In the second case, the same experiment being tried, the dog showed itself after several weeks to be perfectly well, with normal urine From the first of these experiments we must conclude that bacterial activity about the mouth of the ureter is fraught with the gravest danger—a fact to which we shall frequently have to revert The second experiment is a demonstration that even in the case of the dog the ureters may discharge upon the skin for a time without a resulting pyelonephritis

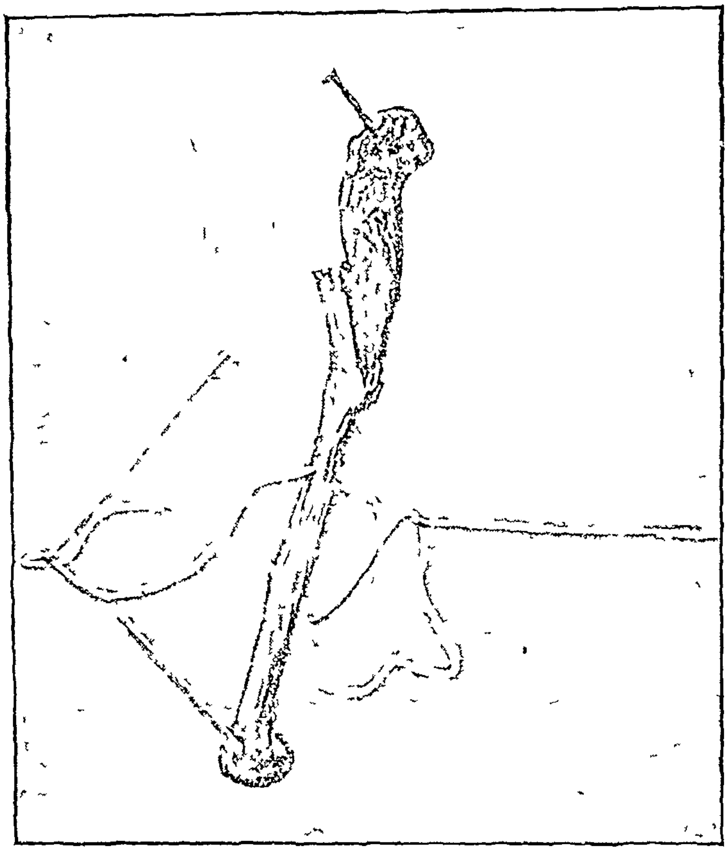

Fig 7 —Writer's method of lateral implantation of the ureter, illustrated upon a piece of human ureter The upper portion is being drawn into the lower by the two threads

Implantation of the Ureters into the Small Intestine has been practiced experimentally by a number of persons, in recent years But I am not aware that any one now seriously recommends the procedure in practical surgery The disadvantages of the small intestine as a receptacle for the urine are so much greater than those of the rectum that they must be obvious to all Of these the most important are the facts that the urine discharged into the small intestine would have to traverse, before extrusion, a much greater extent of intestine than would be the case with implantation into the rectum, and that the structure of the small intestine is still more complicated than that of the rectum

I have made two experiments upon dogs to establish the value of the procedure In both cases a single ureter was implanted into the bowel, about eighteen inches above the ileo-cecal valve In both instances no serious inconvenience to the animal was observed But upon killing the animals about ten days after the operation, the kidneys corresponding to the implanted ureters were found swollen and showed all the signs of pyelonephritis The patency of the opening into the bowel was in both instances slightly compromised, so that there was a collection of a couple of drachms of purulent urine in the pelvis of the kidney and the ureter As the result of these experiments does not differ from that of some of the implantations into the rectum, I would regard the upper portion of the intestine as less suitable than the rectum, solely on account of the a priori reasons already advanced

Implantation of the Ureters into the Rectum was suggested by Roux and put in practice by John Simon in a case of exstrophy of the bladder, with an unfavorable result Chaput has, according to Rosenberg, recently practiced the method successfully in two cases Morestin, according to the same writer, successfully practiced the operation in experiments upon the lower animals Whether one or both ureters were implanted in the rectum is not stated

Novaro,[37] an Italian, published in 1887 an elaborate account of an experiment upon a dog in which both ureters were implanted in the rectum The dog recovered from the operation and was killed about thirty days afterward The ureters were found neatly healed into the rectum and a microscopic examination of the kidneys was made The testimony of the pathologist who made the examination is not absolutely unequivocal as to inflammatory changes, and no bacteriologic examination of the mucous membrane of the pelves of the kidneys and the mucous membrane of the ureters was recorded

Tuffier[69] describes his own experiments in this direction, and reached such unsuccessful results that he advised against the procedure

Gluck and Zeller[77] experimented upon this subject without success, and emphasize the importance of stricture formation with hydronephrosis

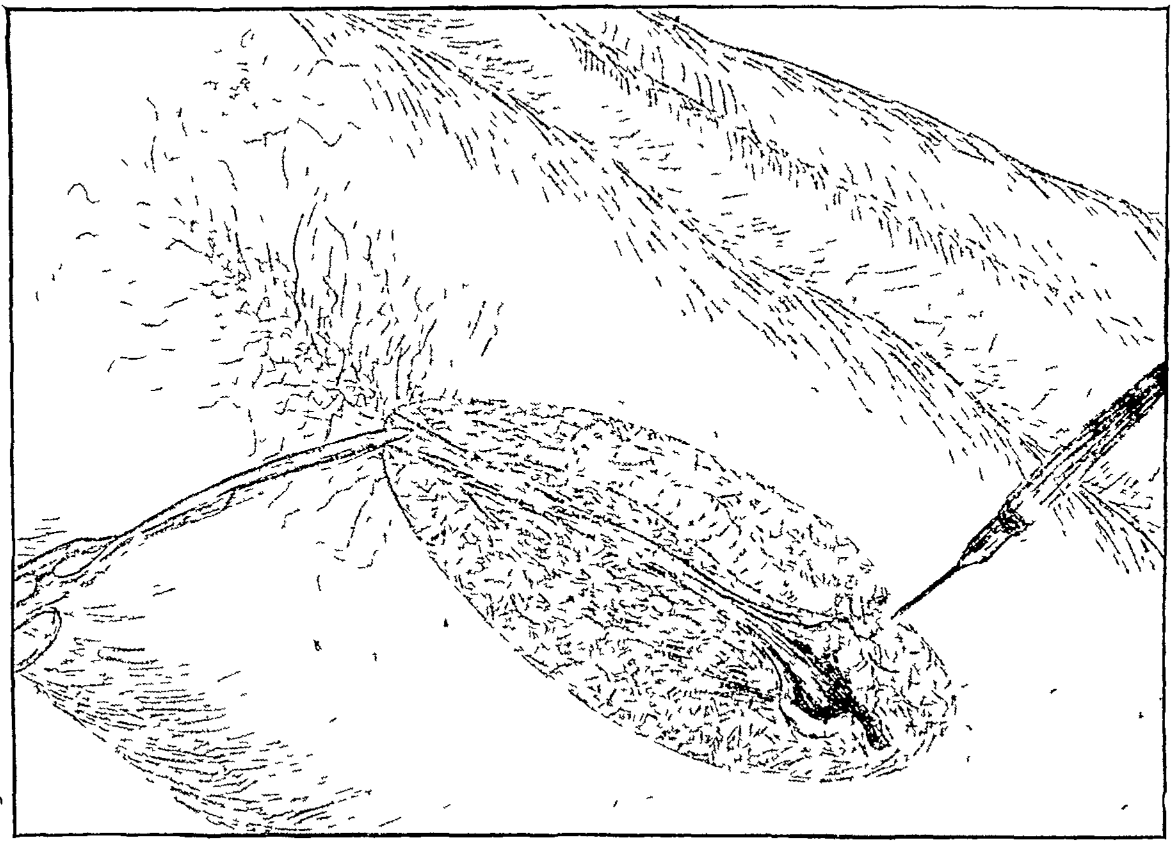

Fig 8—Writer s method of making a vesical flap to meet the ureter when the peritoneum is opened The flap reaches to within an inch of the umbilicus, which is not shown in the drawing

Bardenheuer[5] studied the same questions with more encouraging results Unfortunately his original work is not accessible to me

In our own country, Dr Harvey Reed[50] of Mansfield, Ohio, presented before the AMERICAN MEDICAL ASSOCIATION in 1892, a paper recording twelve experiments upon this subject Dr Reed recommends the implantation of a single ureter in the rectum, but thinks we are not justified in attempting the operation upon both ureters at once

The arguments in favor of the feasibility of implantation of the ureters in the rectum begins with the fallacious a priori reference to the urinary apparatus of birds The argument is (major premiss) birds urinate through the rectum (the usual loose statement), (minor premiss) man is a featherless biped, (conclusion) man should or may upon occasion urinate through the rectum

But, neglecting the absurdity of the conclusion, the argument of analogy may be substantially controverted by these propositions

1 The urine of birds is very slightly moistened It therefore does not so easily undergo decomposition, and more important still, it can not mechanically carry bacteria to the kidneys, as is the case with fluids

2 An amply sufficient argument in itself against a comparison of the species lies in the fact that birds' ureters are supplied with a mucous membrane evolutionally accustomed, as it were, to contact with infected solids and fluids, while the ureters of man are normally accustomed to the most absolute and perfect protection from the action of injurious microbic influences This inherited ability of specialized tissues to resist invasion by micro-parasites is termed "resisting power," and is known to vary with the situation and needs of the different tissues The ducts of all the secreting glands are more or less capable of repelling these invaders, as for example those of the liver and pancreas which normally open into the bacterially filthy bowel, the ducts of the salivary glands similarly open into an exceedingly "septic" cavity, the Bartholinian glands open upon the septic vulva These various ducts rarely carry back to the glands which they supply the materials for their inflammatory destruction It is true that some of them are protected by a slightly or relatively perfect valve action of the mucous membrane at their outlets, but their main strength in opposing microbes must lie in their resisting power, acquired by evolutional cycles of association with their enemies The ureters, however, are among the most perfectly protected structures in the whole human anatomy It is true that they stand in mechanical communication with the external filth But the commerce of fluid is all in one direction—*nulla vestigia retrorsum!* Two powerful sets of gates close after the departing urine—first, the valve-like folds of the cystic mucous membrane at the mouths of the ureters, second, the sphincter vesicæ at the exit of the bladder Each of these barriers is effective for a long time in repelling invaders A violent urethritis often occurs without a cystitis A violent cystitis often occurs without a urethritis These well-protected ducts, the ureters, are therefore guarded so carefully that they need only in pathologic circumstances to meet microorganisms, and are therefore weak and well nigh impotent to resist such enemies How absurd and unthinking it is, then, to thrust the ends of these delicate tubes into the filthy rectum or small

intestine, filled with not only solid but liquid and gaseous materials to distend and defile the ureters and pelves of the kidneys

The statement made by Dr Reed that, in recto-vesical fistula, "the rectum usually becomes reconciled to the presence of the urine, and were it not for the escape of the feces into the bladder and the production of acute cystitis, there would be little to fear from this malady except some possible inconvenience," shows a pathetic regard for the powerful rectum, but no thought or consideration for the defenseless ureters In vesico-rectal fistulæ the feces might lie in contact for some time with the bladder wall without setting up inflammation of the ureters But we all know from daily experience that the great danger in all cases of septic cystitis lies in possible uretero-pyelo nephritis In chronic cystitis this extension of inflammation does not always produce an immediately fatal result The process may be slow and the patient may die months or years after the inception of the cystitis, from some acute exacerbation of the nephritis

The arguments in favor of rectal implantation of the ureters from analogy and from pathology are therefore wholly fallacious

Experimental evidence upon this subject has been, (1) negative, as in the work of Tuffier, one of the most reliable and accurate experimental surgeons, (2) incomplete, as in the case of Bardenheuer, Morestin and Novaro, or (3) incomplete and imperfectly observed, as in the report of Dr Reed already cited

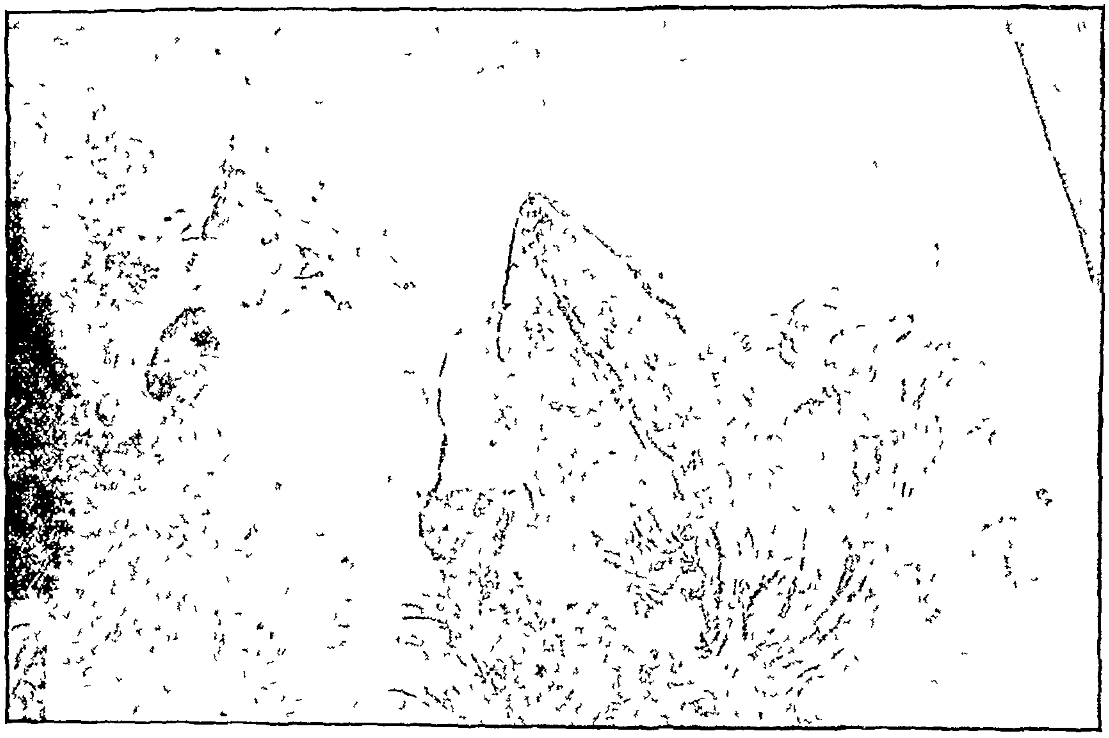

Fig 9—Writer's method of turning upward a vesical flap to meet the ureter Although the peritoneum is unopened, the flap reaches a point within three inches of the umbilicus, seen at the upper edge of the cut

The first of these classes requires no discussion The evidence of these surgeons is clearly against implantation of the ureter in the rectum

By "incomplete evidence," I mean that while the results of these experimenters were favorable, their published trials of the procedure were too few in number to convince us that their successes were more than exceptional We have no reason to believe that they could repeat the effort at will without disaster Moreover, the observation of the strongest case yet recorded, that of Novaro, in which both ureters of a dog were implanted in the rectum and healing was found perfect after thirty days, is imperfect in that no bacteriologic examination of the pelves of the kidneys was made

Dr Reed reaches the strange conclusion, "that the unilateral implantation of the ureter in the rectum is a possible and practicable surgical procedure" He bases this conclusion upon a priori reasoning which I have already refuted, and upon three experiments upon dogs

(1) Unilateral implantation—dog recovered from the operation and was killed eight or ten weeks later, specimen "rendered useless by wanton mutilation"

(2) Dog killed twenty-four days after operation, kidney "congested and shows evidence of acute nephritis," attributed to hydronephrosis caused by external adhesions

(3) Dog killed twenty-five days after operation, no renal congestion, no hydronephrosis, patent opening into rectum

The first of these experiments is not to be considered, as an examination of the specimen was not reported The second is clearly demonstrative of the dangers of the procedure The specimens of the third case, which is the most favorable, were not examined bacteriologically or even microscopically Without these examinations we can not form an accurate judgment Finer changes may contradict gross appearances, and the presence of bacteria, even if the kidney were normal, would obviously be a most serious menace to the future integrity and activity of the organ

In six bilateral implantations, Dr Reed reports three deaths from acute general peritonitis, one death from acute nephritis, one death from abscess of the abdominal wall, and one death from peritonitis and nephritis In one third of these cases, nephritis was confessedly present No bacteriologic or microscopic examination of the pelves and kidneys of the other cases was made

From this consideration of Dr Reed's experiments we must conclude that, so far as the feasibility of rectal implantation of the ureter is concerned, his researches are in part directly contradictory evidence, and in part entirely incomplete

Tuffier's[69] experiments gave evidence contradictory to the possibility of utilizing the bowel as a receptacle for urine

It seems to me that the feasibility of this operation rests upon a satisfactory answer to the following inquiries

1 Does our mechanical technique assure us of reasonable safety in opening the septic rectum and fastening into it the ureter?

2 Does the rectum tolerate the urine and satisfactorily extrude it?

3 Do the ureter and the corresponding kidney tolerate the new anatomic arrangement?

4 Does our technique insure us against stenosis of the duct at the point of junction with the rectum?

The first of these questions can be answered with a hesitating affirmative The trials of the procedure which have thus far been made upon human subjects have not all been published, of this I am assured by personal communications to which I am not at liberty to make specific reference These unpublished failures are doubtless due to peritonitis from infection through the rectal opening Dr Reed's technique is in the main good There is no need of especial care in excluding the aseptic urine from the peritoneal cavity, it is in no such degree "irritating," as is the case with sublimate and other antiseptic solutions The main immediate danger lies in the escape of fecal matter from the bowel It is evidently proper, as Dr Reed has done, to take up with the ureter a fold of peritoneum which is carried into the rectum Dr Reed passes a loop of thread over the end of the ureter, and by means of a needle threaded upon the loop carries the thread down the rectum a short distance and out through the rectal walls Traction upon the thread draws the ureter well into the bowel, and after sutures are passed through the loose tissue about the ureter, the loop is released by cutting short the thread and allowing it to retract into the bowel

Novaro's technique is very minutely described It involves a V shaped incision into the bowel, and seems to me unnecessarily complicated

The method I have employed experimentally is as follows

Raise an ample fold of peritoneum with the ureter After severing the ureter, ligate the cystic end of the duct, and then split the opening of the renal portion of the tube with fine scissors upward for a distance equal to three times its diameter Cause two small needles armed with a single fine silk or catgut thread to pass from within outward through the split end of the ureter The ureter is thus grasped in the loop Now pass the two needles into the bowel through a small longitudinal slit on the free border and carry them downward about one-half inch When they are now pushed out through the rectal walls, the ends of the thread may be lightly tied together, drawing the ureter *into position* and permanently maintaining it there The operation is completed by covering in the knot with two or more Lembert sutures, closing the rectal wound as well as possible without compressing the ureter, and applying a peritoneal graft I made eight experiments by implanting a single ureter into the rectum after this manner Three of these dogs died of general peritonitis I have no hesitation in saying, however, that further practice would diminish this death rate Still, it is apparent that the primary mortality from peritonitis must be high, since we are not at liberty to apply sutures tightly about the opening in the bowel, but must depend partly upon rapid peritoneal *proliferation to close the wound But* even if closure could be perfectly secured at once, the escape of septic matter which almost inevitably occurs when the bowel is opened exposes the peritoneum to great risk of infection

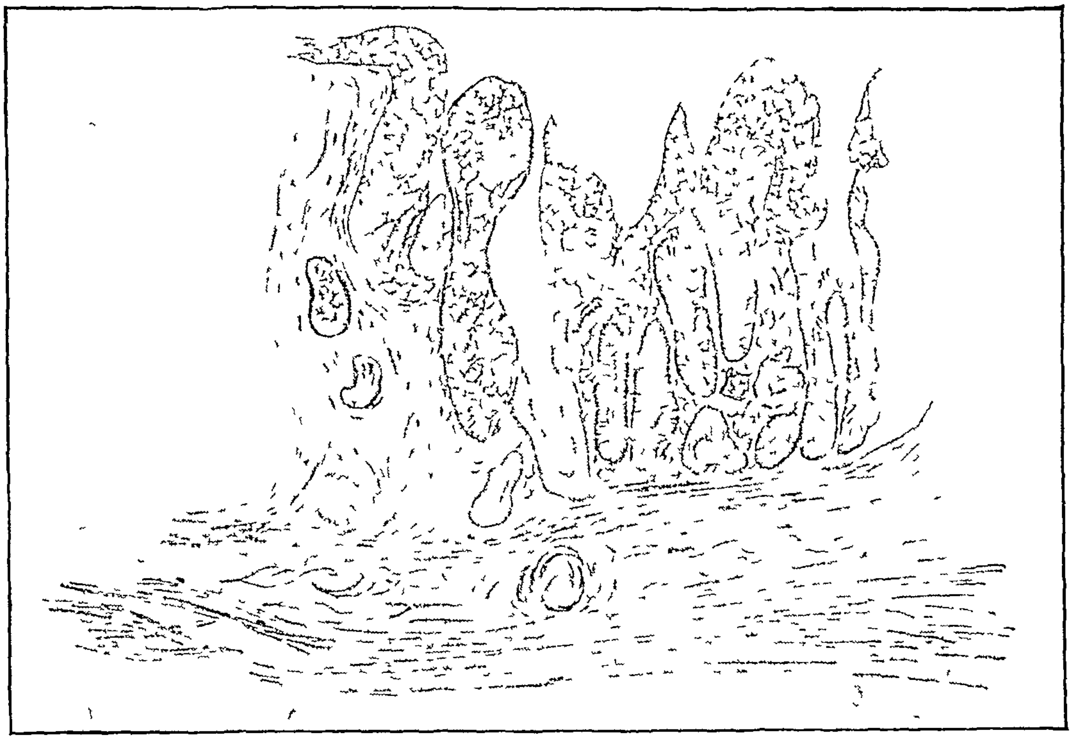

Fig 10 —A section from the junction of a knuckle of small intestine and the bladder wall On the right the cylindrical cells of the implanted bowel, on the left the flat epithelial cells of the bladder displacing the cylindrical cells Rosenberg, Virchow s Arch, Band 131

The second of these queries, as to the toleration of the urine by the rectum, can be quickly disposed of Experience has amply proved that the rectum can easily maintain its integrity in the presence of the urine And indeed, no one seems to have seriously raised the question except to answer it in the affirmative

But the third question—involving the tolerance of the ureter and kidney for the new anatomic conditions—has not attracted the attention which it deserves, although infection has long been known to travel up the ureters with facility, as shown, for example, by Poirier[45] For in reality this is the most important of all the questions It is not to be expected that the rectum will refuse to submit to contact with the urine but that the ureter, with its delicate mucous membrane leading to the easily inflamed pelvis, calyces and tubules of the kidney, should be expected to withstand the effect of being suddenly implanted into a reeking culture ground of the most various bacteria, is more than I can comprehend

The experiments of previous investigators have not been directed to a solution of this question From Dr Reed's paper we gather that in two out of six unilateral implantations there were marked gross evidences of nephritis It is probable that the number would have been much greater if the animals had been allowed to live longer

Of eight dogs in which I implanted one ureter in the rectum three died In each of these three cases the kidney belonging to the implanted ureter was violently inflamed, being swollen, turgid and heavy, with muco-pus upon the mucous membrane of the pelvis The following is a detailed account of one of the cases

April 26 —Dog of thirty pounds weight, curly female Following the technique already described the right ureter was implanted in the rectum A small amount of fluid fecal matter escaped from the rectal wound but was wiped away as carefully as possible The operation was completed by a careful toilet of the peritoneum and closure of the abdomen Forty eight hours later the dog was found in a dying condition and was killed A careful examination of the abdominal cavity showed a moderate amount of peritonitis about the site of implantation There was no leakage from the bowel The left kidney and ureter were normal in all particulars The right ureter and kidney were in a state of violent inflammation They were swollen and intensely red In the pelvis of the kidney which was opened with a red hot knife were a few drops of muco purulent fluid with a tinge of blood in it Cultures were made under all the indicated precautions The patency of the ureteral canal was demonstrated by passing a small probe into the bowel

Microscopic examination shows violent hemorrhagic inflammation of the pelvis and pyramids of the kidney, as shown in the micro photograph Cultures of staphylococcus pyogenes aureus and other bacteria grew in the gelatin tubes inoculated, in a few days

The five remaining dogs recovered from the immediate effects of the operation and were killed between the fourteenth and twenty-first days after the operation In three of these dogs the kidneys corresponding to the implanted ureters were in a state of morbid suppurative inflammation, pus being found in the pelves of the kidneys The patency of the opening into the rectum was not so perfect in three cases as in those already described, as it required a small probe to pass into the rectum

(Dr Reed mentions in one case, (Exp 11) of the implantation of both ureters that the right ureter was somewhat obstructed, the left freely open, nevertheless, there was violent inflammation of both kidneys)

Implantation of both ureters in the rectum simultaneously, is an unmistakable test of the tolerance of the ureters and kidneys, provided the subject escape death by peritonitis I performed six operations for the implantation of both ureters in the rectum All the dogs died within six days Four deaths were due to general peritonitis alone, the two other deaths were due to nephritis without complicating general peritonitis In one of those dying of peritonitis and nephritis, there was moderate obstruction of the ureter causing retention of the urine in the pelves of the kidneys The same thing occurred in one of those dying of nephritis In none of these cases were the kidneys in such a condition that they could be expected to regain the performance of their functions in the face of so much infection

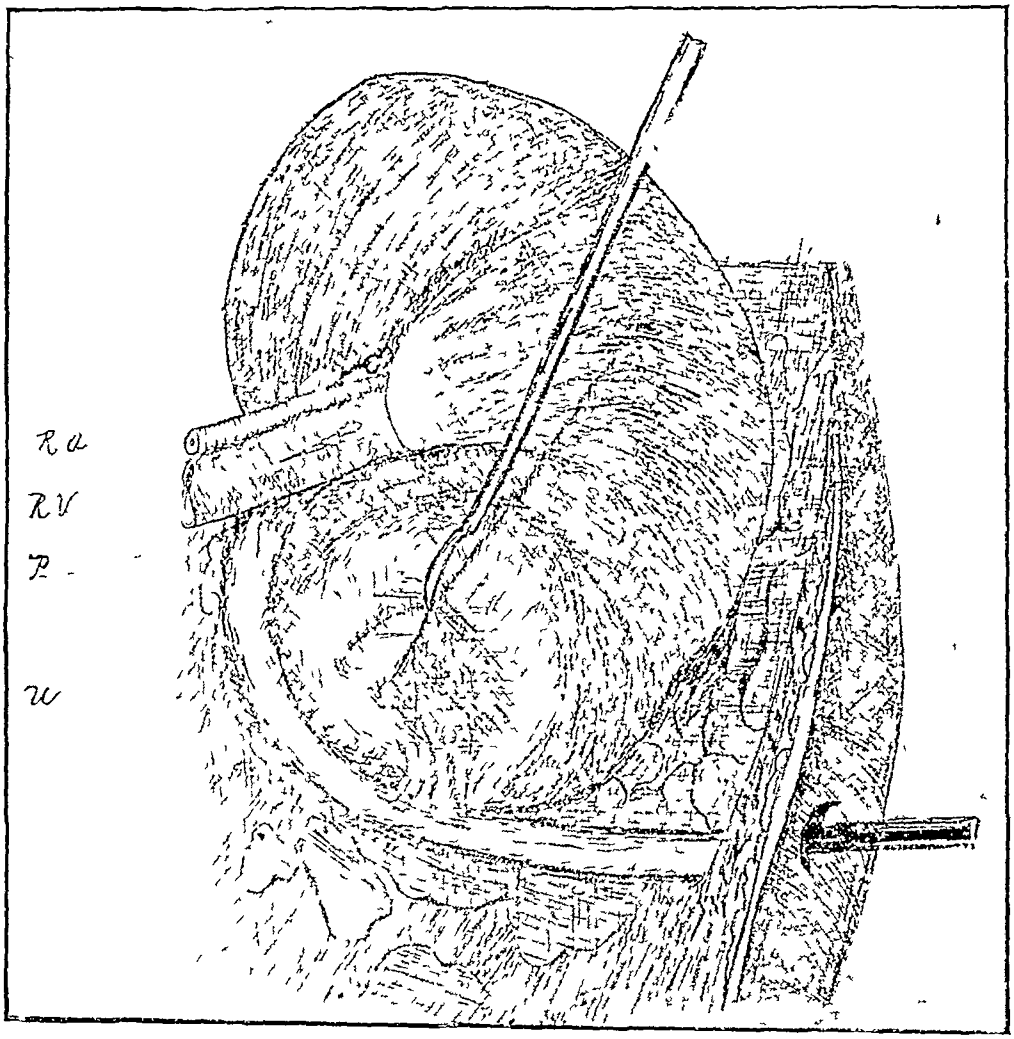

Fig 11 —Implantation of the ureter upon the skin of the back Le Dentu

It will thus be seen that in no single permanent introduction of the ureter into the rectum has it been demonstrated that inflammatory reaction on the part of the kidneys was absent On the contrary, in a large majority of the implantations indications of pyelonephritis were glaringly evident even upon gross examination My conclusion is, therefore, that the ureters and kidneys are absolutely intolerant of this interference

The answer to the last question can not be gained from the experiments thus far recorded, inasmuch as the dogs were killed too early to admit of scar contraction taking place at the point of implantation But when we remember that the lumen of the ureter is exceedingly small, that this lumen is diminished rather than enlarged by the act of securing it in the rectum, that scar contraction must inevitably occur at the circle of cicatrization at the opening into the rectum, and above all that during the first few days of wound healing, as well as later, the constant tendency of the muscular fibers of the rectum is to lessen the circumference of the communicating opening between the ureter and rectum, we can not feel any confidence whatever in the permanent patency of the opening after the lapse of months and years No implantation of a single ureter into the rectum either experimentally or in the human subject, should be accepted as favorable evidence, unless an autopsy has been made a long time after the operation

Of all these arguments the readiest and most conclusive is that the infection of the upper urinary passages is inevitable This is proved by the observation which I have recorded, showing that in one instance violent infection of the ureter and pelvis of the kidney occurred, with hemorrhagic purulent inflammation and the presence of abundant bacteria in the bloody pus at the end of forty eight hours

From this study of the possibility and practicability of implantation of the ureters in the rectum, the conclusion is inevitable that intestinal or rectal implantation of the ureter is primarily and remotely an extremely dangerous procedure unjustified by reason and condemned by experiment, and second that, inasmuch as the vital objections to this expedient are fundamental and not dependent upon criticism of a faulty technique, this operation must be regarded hereafter as unjustifiable in practice upon the human subject

Stopping the Secretion of Urine may be accomplished by ligating the ureter, or by the obvious alternative of removing the kidney

The immediate and remote consequences of complete ureteral obstruction have been the object of study by a number of physiologists as well as pathologists Arnold Holste[8] has given some study to this subject and finds that, after ligation, the pelvis of the kidney is first dilated, then the tubuli recti and finally the remaining tubules are distended

When obstruction is complete, secretion stops as soon as extravascular urinary pressure equals intravascular blood pressure The kidney, as a whole, becomes larger in all cases of obstruction, and especially is this the case when the stoppage is effected gradually or when it is intermittent, as is the case with compression of the ureters in carcinoma uteri or in intermittent hydronephrosis from calculi of the bladder or pelvis Orth[40] formulates the rule that the more slowly the total obstruction is reached the greater will be the sacculation

The facts that secretion stops entirely when the ureter is ligated, that sacculation is slight when there is absolutely no leakage and that atrophy of the parenchyma of the kidney occurs later on, have led some authors to recommend ligation of the ureter as an expedient to be adopted when it is incapable of performing its function and when lesions are irreparable This recommendation has been made by one of the French writers

The idea seems chimerical for a number of reasons LeDentu[37] counsels against it for two reasons

1 Because of antecedent infection (which is liable to convert a simple hydronephrosis into a pyonephrosis)

2 Because "grave accidents" are liable to occur

These grave accidents which LeDentu does not specify are indeed sufficiently grave One readily thinks of slipping of the ligature, infection of the ligature which would allow infected pent-up urine to escape into the retro peritoneal space if not into the abdominal cavity itself, rupture of the distended kidney, etc Again the sudden stoppage of the ureter in experimental animals always produces an enormous venous congestion, especially of the veins upon the capsule of the organ Rupture of these veins with dangerous hemorrhage would not be inconceivable in patients whose vascular systems are in an abnormal condition An entirely different problem which the suggestion brings up, is as to the ability of the remaining kidney to bear the additional burden of secreting the urine which would have been discharged from the other kidney This danger would be equal to that which we fear in primary nephrectomy

To me the greatest objection to the method, except of possible infection, lies in the fact that the kidney is sacrificed as completely as if removed The kidney is an organ which has heretofore been sacrificed for ureteral disease or injury far more frequently than it should have been—more frequently than the immediate future will justify

Nephrectomy for simple ureteral fistulæ has been performed many times, usually with success It is unnecessary to refer to the many reports with which periodical medical literature abounds

Kidneys have been sacrificed also for many other equally simple conditions, as intermittent hydronephrosis, cicatricial stenosis of the ureter, etc But it is well known that the process of compensatory hypertrophy of the remaining kidney always adds gravity to nephrectomy and, as one kidney is liable to many forms of disease while its fellow remains intact, it follows that the possession of two kidneys is a great safeguard to the patient These facts are amply sufficient to make it unjustifiable to sacrifice a kidney, except when every means has been resorted to in order to repair the morbid condition Indeed, it is just as improper to remove a kidney for remediable ureteral disease as to remove a kidney because it is movable

CONCLUSIONS

1 The extra-pelvic portion of the ureter is most readily and safely accessible for exploration and surgical treatment by the retro peritoneal route

2 Hence all operations upon the ureters above the crossing of the iliac arteries should be performed retro-peritoneally, except in those cases in which the necessity for the ureteral operation arises during laparotomy

3 The intra-pelvic portion may be reached by incision through the ventral wall, the bladder, the rectum, the vagina in the female, the perineum in the male, or by Kraske's sacral method

4 The ureter is not only exceptionally well protected from injury, but by its elasticity and toughness resists violence to a remarkable degree

5 The histology of the ureters furnishes most favorable conditions for the healing of wounds

6 Longitudinal wounds of the ureter at any point, heal without difficulty in the absence of septic processes, under the influence of ample drainage

7 In all injuries where the urine is septic before the operation, or where the wound is infected during the operation, drainage must be effected

8 The chemic composition and reaction of the urine must be studied in all injuries to the ureter, the urine being rendered acid, if possible, and the specific gravity kept low

9 The pelvis of the ureter is, *cæteris paribus*, the most favorable site for wounds of the ureter, since scar contraction is not so likely there to be productive of ill results

10 In aseptic longitudinal wounds of the ureter occurring in the course of laparotomy, suture may be practiced and the peritoneum protected by suture

11 Transverse wounds of the ureter involving less than one-third of the circumference of the duct should be treated by free drainage (extra peritoneal), and not by suture

12 In transverse injuries in the continuity of the ureter, involving more than one-third of the circumference of the duct, stricture by subsequent scar contraction should be anticipated by converting the transverse into a longitudinal wound and introducing longitudinal sutures

13 In complete transverse wounds of the ureter at the pelvis, sutures may be used if the line of union be made as great as possible

14 In complete transverse injuries of the ureter in continuity, union must not be attempted by suture

15 In complete transverse injuries of the ureter in continuity, union without subsequent scar contraction may be obtained by the writer's method of lateral implantation, as described

16 In complete transverse injuries of the ureter very near the bladder, the duct may be implanted, but with less advantage, into the bladder directly

17 At the pelvis of the ureter, continuity after complete transverse injury may be restored by Kuester's method of suture, providing the severed ends can be approximated by slightly loosening the ureter from its attachments

18 Rydygier's method of ureteroplasty, in such injuries may be tried if other methods can not be utilized The primary operation should at least fix the ends of the tube as nearly as possible together

19 In both transperitoneal and retroperitoneal operations the ureteral ends can be approximated by my method even after the loss of about an inch of its substance

20 The use of tubes of glass and other materials for the production of channels to do duty in place of destroyed ureteral substance must be rarely satisfactory, and even if temporarily successful, the duct is almost sure to be choked by scar contraction

21 The implantation of the cut ends of a ureter into an isolated knuckle of bowel is objectionable, 1 because the bowel is not aseptic, 2, because the operation is too dangerous

22 In injuries of the portion of the ureter within the pelvis, with loss of substance, the ureter should be treated as follows if possible, the continuity of the ureter should be restored by the writer's method

23 If this is not possible, the ureter if injured in vaginal operations should be sutured to the base of the bladder with a covering of mucous membrane as far forward as possible, with a view to a future implantation or formation of vesico vaginal fistula with kolpokleisis

24 In injuries to the pelvic ureter during laparotomy, where the continuity can not be restored, and where temporary vaginal implantation can not be effected in the female or vesical implantation in the male, the proximal extremity of the duct should be fastened to the skin at the nearest point to the bladder

25 In ventral ureteral fistulæ opening near the bladder, the ureteral extremity may in some instances be planted directly into the bladder without opening the peritoneum

26 In such cases where the ureter will not reach the bladder a flap may be raised from the anterior vesical wall and reflected upward, extra-peritoneally, to meet the ureter and form a tubular diverticulum

27 Such a flap may be so elongated by a preliminary operation to transplant the peritoneum back of the fundus, or by accurately suturing it there at a single sitting, that median ventral fistulæ of the ureter may be cured if they open at any point an inch or more below the umbilicus

28 Symphyseotomy is a valuable and justifiable preliminary step in these plastic vesical operations

29 It is legitimate when both ends of a cut ureter open upon the abdominal wall to try Rydygier's method

30 Implantation of one or both ureters into the rectum is absolutely unjustifiable under all circumstances because (1) the primary risk is too great, (2) there is great liability to stenosis of the duct at the point of implantation, (3) suppurative uretero pyelo-nephritis is almost absolutely certain to occur, either immediately or after the lapse of months or years

31 Ligation of the ureter to cause atrophy of the kidney is unjustifiable

32 Extirpation of a normal kidney for injury or disease of the ureter is absolutely unjustifiable, except where the ureter can not be restored in one or other of the ways cited

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AMPUTATION AT THE HIP-JOINT, BY WYETH'S BLOODLESS METHOD

Read before the Southern Surgical and Gynecological Association, at New Orleans La, Nov 14, 1893

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Dr John A Wyeth read a paper on a "Bloodless Method of Amputation at the Hip-joint,"[1] at the meeting of the AMERICAN MEDICAL ASSOCIATION in 1890 He had previously reported two cases successfully operated on by the method, to the Section of Surgery of the New York Academy of Medicine He again described his method at the Pan American Medical Congress in Washington

These cases were sarcomatous tumors of the thigh In addition to these two successful cases, he gives also in detail in the paper referred to, two cases operated on successfully by McBurney and Fluhrer, the first being an infiltrating sarcoma of thigh, the second an osteo sarcoma

As to bleeding in these four cases Wyeth reported that in his own two cases there was "*no bleeding at all*," in Fluhrer's not more than four ounces of blood was lost during the whole operation, while in McBurney's perhaps "not an ounce in all" In Fluhrer's the operation lasted one hour and a half, in McBurney's case the time is not stated, but the operation is said to have been finished "with great rapidity"

Since these cases were published a number of surgeons have employed the method, and some valuable contributions have been made to the literature of amputation of the hip I have been able to collect the following cases, which I shall give without any attempt to report them in chronological sequence

Case 5—Case of Dr John B Deaver—The patient, female age 20, fell down stairs in 1886 and sustained an injury of the hip In August, 1888, an abscess formed and was opened In October, 1889, the femoral head was excised for necrosis In September, 1890, another abscess formed There were sinuses and manifest enlargement of femur There was evidently a mild septicemia in progress Oct 21, 1890, under ether, the limb being rendered bloodless by Esmarch's bandage, Wyeth's amputation was done On November 30 the patient was entirely well

Case 6—Case of Dr Nancrede—T M, age 31 Patient had suffered of strumous disease of left knee-joint, which had been treated by tapping, washing and iodoform injection Two months later another surgeon performed a supra condyloid amputation using diseased tissues for his flaps Wound did not heal, lower half of thigh becoming honeycombed with tubercular sinuses There were evidences of incipient phthisis

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[1] Dr Wyeth first employed the method successfully in an amputation at the shoulder joint The hemorrhage was so well controlled tha he was led to resort to the same expedient in hip amputation Dr J H Brinton has reported two cases (one successful) in which he employed the method of Wyeth in shoulder amputation (Annals of Surgery XVIII, 93 321)

Dr Nancrede operated by Wyeth's method and patient recovered without a bad symptom

Case 7—Lanphear's first case—H M, male colored, age 9, suffering of osteo myelitis of femoral shaft An operation was made Oct 21, 1890, for the relief of the diseased tissue, but on October 24 his condition was so desperate that there could be no longer any delay On October 24 Wyeth's amputation was made Scarcely one ounce of blood was lost Convalescence was rapid

Case 8—Lanphear's second case—O M, male, age 15 Osteo myelitis of entire shaft with profound septicemia Amputation April 19, 1892, by a modification of Wyeth's method About two ounces of blood lost by parenchymatous oozing Operation completed in twenty-nine minutes from beginning of anesthesia Death by septicemia

Case 9—Lanphear's third case—Miss A, age 28 Had been subjected to a series of amputations for the relief of a violent neuralgic pain The great toe had been first amputated by the physician, no relief A few months afterward another surgeon made a Chopart's amputation Subsequently the leg was amputated just above the ankle and later just below the knee Still no relief, whereupon a supra-condyloid amputation was made No amelioration being accomplished, a sixth amputation was made through the middle of the thigh After repeated examinations, Dr Lanphear reluctantly, at the urgent request of her physician, amputated the seventh time, at the hip, employing his modification of Wyeth's method

There was no loss of blood Recovery rapid and complete No recurrence of pain

Case 10—Lanphear's fourth case—F P, male, age 28 Some years previously amputation had been made through the thigh for injury to knee Abscesses formed from wearing an artificial limb When seen by Lanphear was pale, very anemic, suffering from septicemia Amputation at hip Feb 24, 1893, by Lanphear's *modification* of Wyeth's method More blood lost than in any one of the others, owing to the profunda being overlooked, due to its high origin, until after the constrictor was removed Patient, however, did well although recovery was somewhat retarded by suppuration of the stump

Case 11—Ahern's case, Quebec—Male, age 22 Operation called for by large osteo-sarcoma of the lower end of femur About two ounces of blood lost Although not explicitly stated, I judge from context that the patient recovered

Case 12—J McFadden Gaston—Patient, male, with very large cystic sarcoma of left thigh, involving the bone The cyst was first evacuated, several gallons (?) of a dark brown fluid being drawn out The cyst filled rapidly Hip amputation was decided upon Under the A C E mixture, assisted by Drs Price, Boland, Renouff, Nicholson, Giddings, Earnest and Divine, Wyeth's operation was done There was a considerable loss of blood, largely from a general oozing, which, uncontrolled by hot carbolized water, was finally stopped by sponging with a mixture of spirits of turpentine and camphor

There was little shock, easily controlled by hypodermatic injections of ether and whisky For twenty-four hours he did well, until there supervened a diarrhea which became colliquative and continued for ten days in spite of the most energetic measures He died on the twenty sixth day after the operation

Dr Gaston thought the lowering of the vitality from the diarrhea had much to do with the fatal termination, but, he remarks, it would appear that the failure at one time to open the stump for three days led to septic contamination, which was the immediate cause of death But for this over sight, he thinks, the case ought to have had a favorable termination The amputated part after two gallons of fluid had been removed weighed seventy-three pounds

Case 13—W W Keen, Philadelphia—Patient, female age 30, five months pregnant Present trouble began seventeen months ago, during previous pregnancy, with swelling of both legs, especially the left After delivery, pain and swelling diminished, but a lump remained in left popliteal space In May 1891, this became very painful The pains were sharp and shooting in character The tumor increased in size until at time of operation it extended from the calf to the groin, measuring twelve and five-tenths inches in length and twenty-three inches in circumference at the lower part of the thigh Lymphatics not enlarged

Operation—Patient was wrapped entirely in raw cotton except diseased limb No blood lost from stump until after the large vessels had been secured Thirty-three ligatures in all applied Probably eight to ten ounces of blood were lost Duration of operation fifty minutes Delay caused by separation of soft parts from the bone and the securing of the numerous vessels Two drainage tubes were used, but the operator remarked he would in future cases use but one, placing this externally, to prevent infection, since in this case suppuration occurred from infection through the inner tube The progress of the case was, however, uninterruptedly good and the case ended in recovery

Case 14—J D Thomas of Pittsburg, Pa—G S, age 18, male, injured in a rolling mill by a red hot bar of iron, one-half inch in diameter which was thrust into his left thigh about two and one-half inches below Poupart's ligament, going through the long saphenous vein the femoral vein and femoral artery The opening was funnel-shaped, admitting two fingers for a little distance, one finger only being permitted to pass beyond This passed some distance around the inner and posterior aspects of femur At the time of accident he lost a large quantity of blood Although the indication for hip amputation was so clear, the parents would not permit it at first and only consented five or six days later when gangrene had set in Wyeth's operation was done successfully and the condition was at first promising until the end of the second day, when he began to fail and died at 8 P M Thomas very justly remarks the operation might have resulted in recovery if it had been done four days earlier, when it was strongly urged

I have been able to obtain only brief notes of the following cases

Case 15—Dr John A Wyeth New York,[2] female, age 18, for sarcoma, recovered

Case 16—Dr A M Phelps, New York,[2] male, age 58, sarcoma, recovered

Case 17—Dr A J McCosh,[2] male, age 28, sarcoma recovered

Case 18—Dr J Ewing Mears, Philadelphia,[2] male, age 9, osteo myelitis, recovered

Case 19—Dr Archibald E Mallock, Canada,[2] male, age 29 osteo-myelitis, recovered

Case 20—Dr G, A Baxter, Chattanooga,[3] male, age 17, railroad injury, causing pulpefaction of both lower limbs, requiring amputation through right leg and left hip Died of shock

In addition to these cases, which are all I could positively verify or could get a statement of the result of, I have obtained the following from a paper[4] kindly sent me by Dr Wyeth, for presentation to this meeting

Case 21—Dr Frank Hartley, March, 1892, female, age 26, osteo-sarcoma, recovered

Case 22—Dr Merrill Ricketts, 1893, female, age 23, osteo-sarcoma, recovered

Case 23—Dr C A White, 1891, male, age 23, osteo sarcoma, recovered

Case 24—Dr J B Murdoch, 1892, male, age 17, osteo sarcoma, died

Case 25—Dr A M Phelps, 1891, male, age 24, osteo arthritis, recovered

Case 26—Dr A M Phelps, 1892, male, age 16, osteo myelitis, recovered

Case 27—Dr C B Nancrede, 1893, male, age 31, osteo-myelitis, recovered

Case 28—Dr S H Pinkerton Salt Lake City, 1892, male, age 17, tubercular osteitis, recovered

Case 29—Dr S H Pinkerton, 1892, male, age 10, tubercular osteitis, recovered

Case 30—Dr S H Pinkerton, 1892, male, age 42, necrosis, recovered

Case 31—Dr S H Pinkerton, 1892, male, age 43, necrosis, died

Case 32—Dr S H Pinkerton, 1892, male, age 17, osteitis, recovered

Case 33—Dr R L Swan Dublin, Ireland, 1892, female, age 19, chronic osteo-arthritis, recovered

Case 34—Dr W B Johnston, 1892, male, age 39, railroad injury, died

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[2] Transactions Medical Association of Alabama 1892 p 415

[3] Transactions Medical Association of Alabama 1892 p 415 [Dr Baxter also made mention of this case in the discussion of my paper at the meeting of the Southern Surgical and Gynecological Association]

[4] Paper read by Dr Wyeth at the meeting of the New York State Medical Association Oct 9, 10, 11 and 12 1893

Case 35—Dr S H Pinkerton, 1892, male, age 6, gunshot fracture, died

Case 36—Dr H O Walker, 1892, male age 14, osteo-sarcoma, recovered

Case 37—Dr H O Walker, 1893, male, age 21, chronic hip disease, recovered

Case 38—Dr H O Walker, 1893, young man, chronic hip disease, died

Case 39—Dr John B Deaver,[5] 1893, male, age 20, osteomyelitis recovered

Case 40—Dr F W Parham, 1893, male, age 3, sarcoma of thigh, recovered

McCurdy has also operated with his modification, but I have not been able to collect the data of the cases Case No 40 is my own and is as follows

Case 40—John Murdock, age 3 years, a native of New Orleans, applied for admission into children's ward of the Charity Hospital May 8, 1893, service of Dr E D Fenner to whom and to the Interne, Mr Oechsner, in charge of the ward, I am indebted for the notes of the case during his stay in the ward On admission, there was a large growth, size of an adult heart, situated on the inner aspect of right thigh The tumor was easily enucleated The sciatic nerve ran posteriorly in the capsule of the tumor, and the femoral vessels were pushed to the inner side The incision was made from a little above middle of Scarpa's triangle to a point about two and one-half inches above the internal condyle Union was rapid and satisfactory and the little fellow was discharged, apparently cured, May 31

He was re admitted to the ward July 11, 1893 Three weeks previous to second admission, the mother noticed a new growth in the site of the operation When first observed it was about the size of a pigeon's egg It grew very rapidly, when admitted July 11 was as large as the first tumor above described The second operation was done July 12, 1893 The tumor was not easily enucleated as in first instance, being incorporated with surrounding tissues and had to be removed by dissection The wound did well and patient was discharged for the second time on July 30, 1893

Two microscopic examinations were made, in the Pathologic Department of the Hospital, of specimens of the two tumors removed July 12, the report was returned "Sarcoma round- and spindle-celled, cells large and plump" July 19, the report was "Sarcoma, spindle- and small round-celled"

On Tuesday, Oct 3, 1893, I was asked to see the child with the attending physician, Dr J T Scott I found the little fellow rather anemic, but lively and able to go about, though rather awkwardly, without the aid of crutches There was an immense tumor, which I here show you, occupying nearly the whole inner aspect of thigh and filling the popliteal space The tumor was of firm consistency Previous history good The mother attributes the trouble to a severe fall he had sustained in the latter part of March of this year Some time in April she noticed the swelling It increased rapidly and she sought advice at the Hospital Up to the time he entered the Hospital, his health was good The history of case while in Hospital from May 8 to July 30, has been above detailed After leaving there, the tumor soon began to show signs of return The parents took the child East, where they consulted Dr Deaver in Philadelphia The Doctor advised amputation at the hip, but suggested that it might be best to do it at home in New Orleans They returned to New Orleans and consulted their family physician, Dr J T Scott He asked me to see the case We examined the child as above on Oct 3, 1893 I urged amputation at once The glands in the groin were slightly enlarged, probably not from sarcomatous infiltration, but the tumor was growing now with great rapidity The parents readily gave consent Accordingly, removal to the New Orleans Sanitarium was advised On Thursday, Oct 5, 1893, the operation was done in the operating room of that institution Chloroform was the anesthetic, Dr J T Scott administering it I was assisted in the operation by Drs E D Fenner and W E Parker The Esmarch band was applied up to the lower border of the tumor, the tumor not being included for obvious reasons The operation was conducted exactly according to the directions of Dr Wyeth

Ordinary mattress needles were used, one end being cut off at the eye They were very rusty and dirty and had to be sandpapered and disinfected by boiling and carbolic solution In placing the outer needle, I got the posterior end out of the plane of the inner needle I withdrew it and placed it so that the tube would touch both needles, both in front and behind Thus I had to make three punctures No harm resulted from this Little blood was lost from the stump, but a good deal came from the turgid vessels of the tumor My intention was to adopt the suggestion of Murdoch, and not to saw the bone but to disarticulate the femur entire I found it difficult, however, to get the posterior vessels and saw that I should save time really by sawing the bone The vessels of stump being secured, I made the longitudinal incision and had little trouble in disarticulating I found low section of the bone a decided advantage in disarticulating

Rather smart hemorrhage occurred during the disarticulating, the tube having been removed I think it very advisable to place the outer pin higher, so that the bone may be entirely removed before any vessels are secured In that case, it would be best not to saw, but to remove the extremity in its entirety The operation lasted from beginning of anesthesia to application of dressing, one hour and a half, but a good part of the time was consumed with the anesthetic, it being at one time necessary to suspend the child head downward, in order to restore him His condition was so bad for a time that I thought I should not be able to suture the flaps, but he finally revived sufficiently and the operation was completed, one drainage tube only being used, placed in the upper end of the lateral incision October 6, day after operation, redressed on account of great oozing A drop of pus oozed from one of the pin holes

October 7 Redressed Drainage tube removed From this time on, almost daily dressing had to be made, owing to urine infiltration Rubber tissue was used, which protected the line of apposition until the gauze became soaked from above A discharge from the rectum also gave considerable trouble October 19 The stump is closed, but the skin has opened a little, exposing a line of granulations Rubber adhesive strips applied October 24 Complete deep and superficial union The temperature had risen several times above 101 degrees, but for the first two weeks marked 100 to 100 5 degrees After this it fell to normal Catgut was used for ligating the vessels and silkworm gut for the flaps A liberal estimate would make the blood lost during the whole operation not over two ounces, I think much less There was no further suppuration from the pin hole after the first twenty-four hours

Here we have a report of forty cases classified as follows by Dr Wyeth

Sarcoma, 17 cases, 2 deaths, 11 76 per cent
Osteo myelitis, 18 cases, 3 deaths, 16 6 per cent
Injury, 4 cases, 4 deaths, 100 per cent
Neuralgic affections from nerve injury, 1 case, no deaths
For disease, 36 cases, 5 deaths, 13 88 per cent
For injury, 4 cases, 4 deaths, 100 per cent
For both disease and injury 40 cases, 9 deaths, 22 5 per cent

Wyeth gives Ashhurst's statistics as follows
64 1 per cent
For disease, 276 cases, 40 2 per cent
For injury, 309 cases, 82 4 per cent

Luning gives
Gunshot wounds, 239 cases, 98 per cent
Disease, 153 cases, 42 per cent

Emory Lanphear in an article[6] on Wyeth's amputation referring to these same statistics of Luning says, "Surely this is a method which is about as successful as could well be expected, considering the gravity of the operation" Other statistics put the mortality even higher, but taking these as a guide, we find that Wyeth's operation has reduced the mortality for civil practice just one half It has not yet been employed in military practice With such a reduction in mortality, we can well overlook the sneer of Treves, that, "if the after oozing be taken into account' the operation 'can not be regarded as bloodless"

Richard Davy of London, reports a series of ten amputations in nine of which he used his lever The mortality, formerly 60 per cent, is reduced to 20 per cent "Sir Joseph Lister mentions 'a case in which a gentleman specially conversant with the use of the lever failed to bring it into effective action and another where death resulted from mischief done by the end of the rod working in the dark'" I do not think this can be compared to Wyeth's for either efficiency or safety The method of Jordan Lloyd is effective if the tube does not slip, but is more awkward and requires a special assistant to hold the ends Wyeth's will take care of itself, until taken off

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[5] In this case Dr Deaver abandoned the pins and used the tube held up by two tapes, one in front and one behind

[6] American Journal of Surgery and Gynecology, Kansas City, 1893, III, 182-186

Ligation of the femoral artery as recommended by Baron Larrey, somewhat complicates the operation by delaying it, and does not control the posterior hemorrhage

Lister's aortic tourniquet has been used, but is now abandoned by its author for other methods Poppert reports one successful case in which he ligated first the common iliac The method of Buchanan and Hardy of controlling the hemorrhage through an abdominal incision, although successfully done by Hardy, will scarcely meet with the approbation of surgeons

The method of Pean, of catching the vessels as he proceeds is open to the serious objection of being very slow

I come now to the skewer methods

Trendelenburg transfixes the thigh by a single needle passed in front of the neck of the femur and beneath the vessels Over the ends of the needle and in front of the thigh a compressing rubber cord is passed Dr Varick transfixed a second time behind the femur before disarticulating

Robert John Garden of Aberdeen, writes thus in the *British Medical Journal* of Jan 4, 1890 "I have had considerable experience of amputation at the hip joint The result has been uniformly successful, as in my fourteen cases I have had no death due to the operation All my cases recovered except a child aged 9 months (whose leg was removed for a large sarcoma of thigh), who died of measles contracted after the operation So far as cutting the flaps is concerned, I pretty much followed the plan recommended by Furneaux-Jordan, combined with the skewer securing of the vessels as suggested by Spence My experience does not lead me to regard the risk from shock as very great The operation as described above removes the wound well away from the anus, and by the skewer method, both when antero-posterior and lateral flaps are formed, all danger from bleeding is effectually removed"

The method of Spence seems to be the same as that now described as Myles' Myles thrusts a stout steel skewer straight through the thigh from before backwards The point enters an inch below Poupart's ligament and just to the outer edge of the femoral artery it passes to the inner side of the neck of the femur and emerges a little above the gluteal fold An india rubber cord is passed around the ends in figure of-eight manner

I shall consider now the modifications of the Wyeth method proper Lanphear makes the excellent suggestion to place the outer needle high enough to permit of disarticulation before removing the tube This saves much time and the hemorrhage is diminished In this case I would disarticulate without section of the bone

Thomas advises to place the tube in position first and put the pins through with the tube as a guide regardless of the position of the spine of the ilium He advises also to clear the bone thoroughly before beginning the disarticulation These are both good practical suggestions

We may consider here Senn's method This is especially applicable to those cases where an excision is first to be attempted, but is abandoned for hip amputation Lanphear refers to one case in which the patient bled to death while on the table, Senn's method being used

Finally, I have McCurdy's method to speak of By this method a flap operation with immediate disarticulation may be done A single needle is used, inserted at the most prominent point of the great trochanter, passing directly through the thigh in front of the femur to come out just below tuber ischii This very closely resembles that of Myles' already referred to

The most unfavorable opinion of the operation is that expressed by Nancrede "There is," he says, "one serious objection to Wyeth's method, this is the length of time it takes, which adds greatly to the shock" After completing one serious operation, which has produced an extreme degree of shock, another major operation, that of excision is then undertaken Where skilled assistants are not at hand he thinks the method applicable

I believe, however, by placing the outer pin higher these objections can be overcome to a large extent We can then do as Murdoch suggests and disarticulate without hemorrhage, rapidly and without sawing the femur

In conclusion, I am inclined to agree with Murdoch, that the method of Wyeth is the best yet devised for amputation through the hip joint

BOOK NOTICES

An Analysis of Medical Ethics and Etiquette The Code of Ethics adopted by the American Medical Association, with commentaries, by Austin Flint, M D 12mo pp 97 New York D Appleton & Co 1893

The following analysis of this book, which every physician should have, is intended as a special plea for the maintenance of the American Code of Medical Ethics as it now stands

The work begins with a modest preface, characteristic of the truth loving and guileless author who died full of years and honors, deeply regretted by all who knew him The commentaries, which show ripe scholarship, good taste and loftiness of mind, were composed in moments snatched from his hours of rest and were truly a labor of love

In the introductory remarks the author says "A reader who has given to the subject little or no attention may be supposed to ask, 'wherefore the propriety of recognizing the principles of duty applied to medicine as constituting a distinct branch of ethical science? Are not the rules in ethics which would govern the practitioner of medicine the same as in other applications?' There are certain fundamental truths which, of course, underlie all possible applications of ethics, but the adaptation to different conditions of life call for a separate consideration The rules of conduct adapted to the peculiarities of medicine constitute medical ethics These rules have a moral weight Medical etiquette, on the other hand, consists of the forms to be observed in professional intercourse These are conventional They have not the binding force of ethical rules, nevertheless, they claim observance The medical profession receives not a little ridicule for observing rules of etiquette, but their observance is a protection against not only embarrassment and confusion, but misapprehensions and dissensions, injurious alike to physicians and patients If there be ground for a distinct system of ethics applied to medicine, the rules of conduct which the system requires should be codified A code of ethics adopted by the profession represents the views held by the majority of its members, and is, therefore, binding on all It is indispensable for the sake of reference whenever differences of opinion arise It indicates the proper course to those whose moral perceptions may be defective It may prove a safeguard against the bias of personal interests It thus contributes to the purity and dignity of the medical profession Much would be gained in the popular respect for the profession, were the public better acquainted than they are with the ethical rules by which its members assume to be governed It is, perhaps, a common impression that the objects of a code of medical ethics have exclusive reference to the interests of the medical profession So far from this, the objects are of far more importance to the public welfare than to physicians" Farther on in the introduction he gives the origin of the Code, and then concludes with a statement of the arrangement proposed for the commentaries The work is divided into three chapters, which embrace the entire Code and to each section of the Code appropriate comments are appended

CHAPTER I

THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS

ARTICLE I —*Duties of Physicians to their Patients*

SECTION 1—of this Article is so clearly defined and so well adapted to the instruction of young physicians, that it is difficult to conceive what could have induced any physician to suggest its suppression That its provisions are self-evident to physicians of experience is not doubted, but they are all necessary for the information of beginners, and are as brief as consistent with distinct statement "They antagonize," says Dr Flint, "undue influences arising from self-conceit, an irritable temper, indolence, devotion to pleasure or to occupations which divert from professional duties, and all mercenary considerations At the same time, they do not contravene self-respect and a proper regard for personal interests" There surely is no doubt of the necessity to tell young physicians of their obligations to obey promptly the calls of the sick, that their mission is always one of mercy, that the responsibility they incur in the discharge of their duties is great, and that since their work is generally performed in privacy, the only punishment for carelessness or neglect is through the stings of conscience and the loss of self respect These injunctions and all others in the Code are ennobling and serve to soften the manners and expand the affections of the young, and form them to that propriety and dignity of conduct which are essential to the character of gentlemen (Percival) The third sentence of this first Section is a wholesome amplification of the preceding sentences, and its appropriateness will probably be admitted by the majority of readers The last sentence of this Section has been very harshly and unfairly criticised on various occasions Careful examination shows that it is clear, that its words were well chosen, and that it is necessary How merciful on the part of the physician, how comforting to the patient when firmness is tempered with tenderness, how noble it is in the physician to be tenderly firm, and how necessary it often is for the physician to be condescending, that is, to be yielding in minor details so that his authority may be greater in important particulars for the good of the sufferer! And how can he fail to inspire gratitude, respect and confidence, if he observe these injunctions in letter and spirit?

SEC 2—In the first sentence of this Section the word attention, which occurs in the third sentence of the preceding Section, is repeated, but the repetition seems justifiable The whole sentence, indeed, is complementary to that third sentence, and gives greater force to the injunction The second sentence is rightly placed and pertinent Bodily infirmity often leads to mental imbecility, or to unreasonable caprices, therefore young physicians are enjoined to be indulgent and to make due allowance for the whims of the afflicted None can, with justice, object to the three sentences that relate to the observance of secrecy, which are paraphrased from the Hippocratic oath, and there is not a court of law in the United States that is likely to refuse protection to the physician in the circumstances detailed in this Section The commentaries of Dr Flint on this second Section fill ten pages and are well worthy of careful study.

SEC 3—is short, incisive, explicit, self-explanatory, and necessary It receives from the able pen of Dr Flint an appropriate commentary which is quite sufficient to show its great utility

SEC 4—is the longest in the Code, it contains a little more than two hundred words in six aphoristic sentences, and is so instructive and valuable to young physicians that not a single part or word should be retrenched "Undue solemnity, anxiety and apprehension in the looks, manner or words of a medical attendant on the sick, are extremely unfortunate—they discourage patients, whereas, on the other hand, a cheerful mien, calmness of deportment, and verbal assurances, sometimes accomplish more than drugs" All that is embodied in this Section is self-evident and well known to experienced physicians, but is absolutely necessary for beginners

SEC 5—contains wholesome admonitions to young physicians who are too apt to form gloomy prognostications in cases of serious disease, and sometimes even to abandon the patient, thinking there is no hope of his recovery and being delicate respecting the demand of fees which they believed might not be honestly earned should they continue their visits The very time of the cessation of such visits may have been the climax of a crisis which, ending soon after the arrival of another physician, is followed by rapid recovery In such a case the retiring physician is discredited by the family, even if his successor explains the case and honestly endeavors to exonerate him This alone gives great value to Section 5, but it contains other points of no less value Moreover, in truly hopeless cases, the physician "can often do much toward lessening pain or discomfort—mental and physical, he can contribute to euthanasia, and he can comfort those who surround the bed of death by assurances that in the 'last agony,' as it is miscalled, these manifestations of distress are usually unattended by conscious suffering"

SEC 6—The perusal of Dr Flint's commentaries will convince the most incredulous of the necessity of this Section He says in the concluding sentences "Consultations, when their true objects are recognized by all parties, are of great comfort to an attending physician Undoubtedly, a reason for their being distasteful to him often is a want of full confidence in the honor of the consulting physician Hence, it is important that physicians comply conscientiously with the rules laid down in respect of consultations"

SEC 7—is quite as important as any other Section of Article 1 "It is undoubtedly true that persons will often listen more considerately to counsels or remonstrances from a medical adviser than to those of relatives, friends and neighbors, or even to the admonitions of the clergy It is, perhaps, true that most persons are influenced more by considerations which have reference to life and health than to those which appeal directly to the moral nature" These two sentences show but a small part of the excellent advice compressed in less than a page of Dr Flint's precious work

Article II —*Obligations of Patients to their Physicians*

Dr Flint prefaces this Article as follows 'There are several reasons why this portion of the Code calls for but little in the way of commentary In the first place, the commentator being a member of the medical profession, it is a matter of delicacy not to dilate too largely on the obligations of patients to their physicians In the second place, although in the preparation of these commentaries the hope is entertained that they will have interest for non-medical readers, there is probably little ground for the expectation that they will have an extensive popular circulation In the third place, a large proportion of patients are fully sensible of their obligations to their physicians, and, lastly, the portion of the Code which defines the obligations of patients to their physicians is so clear and comprehensive as not to offer much scope for addition or elucidation For these reasons, instead of making each subdivision a separate heading for comments, the entire Article will be first given, and afterward, brief remarks on the topics which it embraces, following the order in which they are presented in the Code"

Sections 1 to 10 inclusive —Although the author says, in his prefatory note, that this Article calls for but little in the way of commentary, he nevertheless comments on its ten Sections in five pages, and in the most attractive and lucid style which can not fail to carry the fullest conviction of the necessity of every syllable contained in the Article

CHAPTER II

OF THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE

Article I —*Duties for the Support of Professional Character*

Sections 1, 3, 4, 5 —The detractors of the Code seem to regard the first, third, fourth and fifth Sections of this Article as unnecessary They entertain this baseless opinion, probably because they have not read the Article with sufficient attention or reflection The following passages are therefore extracted from Dr Flint's commentaries to show the utility of these Sections, particularly to young physicians "It may be said that the sentiments expressed in relation to the 'duties for the support of professional character,' contained in the first two Sections under this head, are mere truisms and platitudes This may be said with regard to any collection of ethical principles for the regulation of human conduct Experience shows the importance of the embodiment in language of moral principles pertaining to other of the relations of life, and there is reason to believe that this portion of the Code has not an inconsiderable influence upon the character of the profession, by inciting its members to become worthy of it, and to render it still more worthy of the estimation in which it is generally held by the public"

The fourth Section must be especially disliked by the dissenters, on account of the nature of its sentiments which are so distinctly stated as to allow no chance for misunderstanding, either in letter or spirit Dr Flint thus comments on this important Section "There can be no difference of opinion in the minds of worthy physicians as to the acts which in the fourth Section of this Article are specified as derogatory to the dignity of the profession But the propriety of the interdiction of these acts by the Code is not always appreciated by the public As a reason for their being interdicted as 'highly reprehensible in a regular physician,' it suffices to say that 'they are the ordinary practices of empyrics' The public should understand that these practices are criteria of irregular or unworthy practitioners With this understanding, if persons consent to be influenced by such acts, the responsibility for consequences lies with themselves The credulity in regard to therapeutics, which is inherent in the minds of many, will doubtless always afford encouragement for a continuance of the various meretricious methods of obtaining credit for superior medical or surgical skill"

The fifth Section, which is as concise as it is explicit, is doubtless regarded as oppressive by many offenders Here are Dr Flint's remarks upon its provisions "The grounds for the injunction not to patent remedies or surgical instruments, and not to dispense secret nostrums, are not always appreciated by the public Some appear to think that it is dictated by jealousy or professional prejudice The reasons are concisely but clearly stated in the Code Imagine Jenner to have applied for a patent giving exclusive property in vaccination, or keeping it a secret! How different would the names of those identified with the discovery and introduction of anesthesia in surgical and medical practice appear in history, had the attempt not been made to withhold from the profession and the public the agent employed, and to secure a proprietary interest therein! Here, as in all other instances, the restrictions of the Code of Ethics have reference to the welfare of the community, and not to the selfish interests of the medical profession"

Sec 2—of this Article is not contained in Dr Flint's book, probably because he took for his commentaries the original Code of 1847, this second Section having since been inserted It explains itself and will surely not be objected to by the profession

Article II —*Professional Services of Physicians to Each Other*

Section 1 —Only a few extracts are made from the brief but wise commentary to this Article "From the best motives, the professional friends of a sick physician are apt to call upon him, inquire into his case, proffering their opinions and advice, without any concert between them, and the result is that a medical patient may receive no systematic treatment Except in cases where close intimacy dictates a deviation from the rule, a physician should not ask to see another physician in illness until requested to do so The manifestations of interest and sympathy should be limited to kind messages and inquiries through others Medical services rendered to members of the profession should be gratuitous A request to present a bill for services should never be made Such a request implies an expectation that it will not be complied with Any pecuniary acknowledgment by a member of the profession for medical services should be made strictly as an honorarium"

Article III —*Of the Duties of Physicians as Respects Vicarious Offices*

Section 1 —This Article was lately objected to by a dissenting writer who wished it expunged on the ground that it 'refers to a question regulated by custom," losing sight of the fact that the Code is a statement of well-established customs or ethics The following extracts from Dr Flint's commentary are intended to show the necessity of retaining this third Article "The Code of Ethics defines the line of conduct in many instances of which it may be said that a proper courtesy and sense of honor should suffice without formal ethical rules Assuming that an adequate degree of courtesy and sense of honor belong to members of the medical profession in general, to assume this for all members would be to claim for medicine, in a moral point of view, a position far above that of any other pursuit Ethical rules, therefore, are needed for a greater or less number of physicians But, irrespective of any question of moral delinquency, rules are useful by indicating precisely what is to be done under certain circumstances, thus preventing embarrassment and saving the trouble of discussion in particular instances Vicarious offices offer an opportunity for one deficient in a proper sense of honor to undermine the confidence of patients in their physicians This may be done, not openly, but insidiously, by questions, expressions of surprise, over assiduous attentions, etc It will do much toward neutralizing such violations of honor, if the public be made acquainted with the article of the Code which relates to these offices Patients will be led to understand the motive which prompts such dishonorable efforts, and, so far from accomplishing the objects, they will justly react upon unworthy members who act in opposition to the spirit of the Code ”

Article IV —*Of the Duties of Physicians in Regard to Consultations*

Section 1 —This Section of the fourth Article seems to be the objective point of those who desire revision of the Code, their aim being to expunge the whole of the first Section Dr Flint says ‘ of the entire Code this Section alone has occasioned dissension ” He further says that he is “ one of many who think that the Code is here open to objection, not, however, in spirit or intent, but in phraseology The last sentence is the part concerning which an objection may fairly be raised “ The real objection to those whose practice is based upon an exclusive dogma is that they are opposed to the regularly organized profession and use adjectival titles as trade-marks No therapeutic differences could exclude them from the regular profession if they were to drop their distinctive titles and abide by the laws of the profession The most liberal explanatory declarations were made, after the publication of Dr Flint's commentaries, by the American Medical Association, through a special committee of which Dr Flint was a member thus entirely disposing of this question

All of Dr Flint's comments on this first Section are well worthy of insertion, but a few extracts from them will suffice to show how temperately he has written “ It is fair to conclude that the framers of the Code had no feeling of illiberality, and no intention to interfere with the practice of medicine under any circumstances, in the cause of humanity The Code declares explicitly that, ‘ in consultations the good of the patient is the sole object in view,’ and enjoins against declining consultations on the score of fastidiousness The restrictions of the Code are in nowise inconsistent with the demands of humanity in cases of emergency ”

“ In saying that certain practitioners are not to be considered as regular or fit associates in consultation, it is neither said nor implied that a physician should not see a patient even with these practitioners when humanity requires him to do so The tenor and spirit of the Code throughout are opposed to any act of professional inhumanity Moreover, in particular cases, the physician must be the judge of his duty in this regard Practically, there need be no difficulty how to obey the dictates of humanity and, at the same time, conform to the Code, under the guidance of a conscientious regard for both The objectionable point in the Code is that which makes ‘ a practice based on an exclusive dogma ’ the ground of a refusal to meet practitioners in consultation This is not a valid objection Any physician has a right either to originate or adopt an exclusive dogma, however irrational or absurd it may be Dogmas have prevailed more or less in the past history of medicine If in a consultation there be lack of agreement respecting either diagnosis or treatment, the Code indicates in another Article precisely the course to be pursued The true ground for refusing fellowship in consultations, as in other respects, is a name and an organization distinct from, and opposed to the medical profession Whenever practitioners assume a distinctive appellation, thereby assuming to represent an essentially distinct system of practice, taking an attitude of antagonism to the regular profession, seeking popular favor on the ground that they belong to a ‘ new school,’ based on truth and productive of good, whereas the regular profession belong to an ‘ old school ’ based on error and productive of harm—how can there be fellowship either in consultations or in other respects? If they who thus assume an attitude of antagonism to the medical profession conscientiously hold to the distinctive tenets which, as they profess, are the ground of their antagonism, how can they consistently desire to meet members of the latter in consultation, and, with opposing views of therapeutics, how could such consultations accomplish the ‘ sole object in view,’ namely, ‘ the good of the patient? ’ If such consultations were permissible, professional fellowship would be rendered immoral on the ground of complicity in a fraud upon the public It is hoped that the body from which the Code emanated—namely the American Medical Association—will adopt such modification in the phraseology of this Section as will place restrictions on consultation, not on the ground of doctrines or forms of belief, but on separation from and avowed antagonism to the medical profession ”

Dr Flint's hope was soon realized, for the American Medical Association adopted the series of explanatory declarations to which reference has already been made “ Under no circumstances can there consistently be fellowship with any class of practitioners who adopt a distinctive title as a trade-mark, and who are banded in order to impair the confidence of the public in the medical profession To take the ground that, because the Legislature of a State has placed on an equal legal footing, different classes of practitioners, those of one class can not refuse to consult with those of another class, is as absurd as to assert that a Jewish Rabbi is bound to exchange pulpits with Christian ministers, or the latter to affiliate with Mormon elders for the reason that, in the eye of the law, in this country, all religious denominations have equal rights The people demand of their legislators the enactment of laws for the protection of life, liberty and property, but they do not look to them for the institution or the interpretation of codes of ethics

“ There are many, not of the medical profession, who have been led to believe that its members are bound to uphold antiquated traditional doctrines Many seem to think that the ‘ old school practitioners,’ as they are derisively called, are committed to a system of practice expressed by the term, allopathy All medical men know that, so far from these popular notions being true, they are quite the reverse of the truth Allopathy is simply a term of reproach It has no pertinency as applied to the medical profession As is well known by all conversant with the history of medicine, doctrines and practice undergo changes in proportion to the advancement in the several branches of medical knowledge and accumulated experience The tendency, certainly, within the last half century has been to adopt new views too readily, not heeding sufficiently the restraints of a rational conservatism It is desirable that the public should understand that the medical profession is in no sense a sect, as implied by the name, allopathy It allows the utmost latitude of opinion The sectarians in medicine are those who have professed faith in tenets to which they are bound, at least ostensibly, to adhere Opinions held by members of the regular profession, however at variance with those generally entertained, and however absurd, may fairly give rise to criticism and ridicule, but they can not be made occasions for professional discipline With a proper understanding of the reasons which actuate members of the medical profession in declining to meet irregular practitioners, their action can not be attributed to either jealousy or prejudice Their action, indeed, may involve the sacrifice of personal interests, and it concerns the public welfare not less than the dignity and honor of the profession Let the statement be repeated, until no longer necessary for the information of the public, that there are no allopathic practitioners of medicine A regular member of the medical profession should never even tacitly admit the propriety for this designation Let it be understood by the public, as well as by the profession, that there is no necessity for a schismatic separation from the regular profession on account of any peculiarity of doctrine Such a separation is not from necessity but for the purpose of obtaining practice ”

Secs 2, 7, 10 —“ These three Sections of Article IV, although not occurring consecutively in the Code, are here collocated because they contain ethical rules which have reference to the relations of consulting with attending physicians ” The following passages in the commentaries on these three Sections serve to show what are some of the popular errors respecting consultations of physicians ‘ One of these errors is that a consultation, when requested by patients or their friends, implies, as a matter of course, dissatisfaction with the services of the physician in attendance The request should never be considered in that light Connected with this error is another, namely, that it is the office of a consulting physician to pronounce a judicial decision respecting the treatment which has been pursued, or which is being pursued, by the physician with whom he is requested to consult This is not the office of a consulting physician He should be reserved in forming an opinion as to past treatment, inasmuch as the case was not under his observation, and it would be unfair to judge of circumstances which he had not observed, hence, an opinion unfavorable to the past treatment, if indiscreetly formed and still more indiscreetly uttered to any but the attending physician, might do the latter great injustice Still another error is to assume that a physician in consultation has more knowledge or skill than the attending physician, and that, consequently, the latter is to be subordinate to the former in the management of a case A consulting physician may or may not be the superior in knowledge or skill These errors, prevailing somewhat in the profession, have a much greater popular prevalence It is owing to their prevalence that medical consultations are not more frequent Patients and their friends often hesitate to propose a consultation from a desire not to imply want of confidence in the attending physician

The true ground for a medical consultation is the benefit which may be derived by bringing the judgment of two or more minds to bear upon a case There are few things in human life which are generally considered more precious than health, and there are few calamities which, in the minds of most persons, it is more desirable to postpone than death It is, therefore, a singular anomaly that conferences on matters of far less importance than those relating to health and life, such as business interests, politics, social life, etc , are more frequent than medical consultations In cases of disease, these are frequently delayed until the condition of the patient is hopeless, and when no real benefit can possibly be derived from them Not only should they be had earlier, but they should not be limited to cases in which there is more or less immediate danger The fact that they are apt to be thus limited renders them a source of apprehension to patients, and, for this reason, they are sometimes delayed "

SECS 3 4 and 5 —The rules given in these three Sections relate to the etiquette to be observed in consultations Dr Flint's comments, of five pages on these Sections are well worthy of careful study, and show how important it is, in a system of medical morals, to set down rules of etiquette as well as of ethics

SEC 6—was accidentally omitted in Dr Flint's book, but is commented on with Sections 3, 4 and 5

SECS 8 and 9 —After a very judicial commentary on the eighth and ninth sections, Dr Flint adds "There are some points relating to the ethics and etiquette of consultations which are not touched upon in the Code One of these is the duty of a consulting physician who may be asked to take the place of the attending physician in a case while it is in progress It may happen that there is dissatisfaction with the services of the attending physician, of which the consulting physician may not have been aware, and it is proposed that the former relinquish the case into the hands of the latter This transfer of a case is justifiable on but one ground namely, that it is in accordance with the wishes of the attending physician The consulting physician should satisfy himself on this score It is not enough that the attending physician consent He will, of course, do so if requested If not in accordance with his wishes, the transfer should be positively declined by the consulting physician

'Another point relates to subsequent attendance by the consulting physician After a case is ended, in another illness the patient may request his servics as attending physician There may be exceptional instances but, as a rule, such a request should be declined If acceded to, it should be after a full understanding with the physician previously in attendance This and the preceding rule are essential, in order that consultations may be held without risk of injury to the feelings and interests of the attending physicians A physician in consultation, if actuated by proper delicacy and a sense of honor, will, of course, sedulously guard against the possibility of his services being preferred to those of the attending physician

"Another point may be referred to It sometimes happens that a change of an attending physician is made while another physician is associated in consultation Shall the latter remain in consultation with the successor of the former? As a rule certainly not If the change has been made on account of dissatisfaction with the medical treatment, the consulting physician is as responsible for this as the attending physician, and he should decline to remain in consultation If other reasons have led to the change, there are obligations of courtesy which are not to be ignored There should be a full understanding with the attending physician who is superseded The 'good of the patient' is, of course, a primary consideration The action must be determined by the circumstances proper to each case

"There may be circumstances which should properly lead a consulting physician to decline further association with an attending physician, although no disagreement in consultation had occurred If the attending physician fail to carry out measures agreed upon, either intentionally or from inefficiency, it is not just for the consulting physician to be held to an equal responsibility in the case It is the duty of an attending physician to carry out faithfully the course of treatment decided upon, and, if he persistently fail in so doing, the consulting physician is justified in declining to be longer associated with him "

Not a word can, with propriety or consistency, be retrenched from Article IV relating to the ethics and etiquette of consultations

ARTICLE V —*Duties of Physicians in Cases of Interference*

SECTIONS 1 TO 8 AND SECTION 10 —The two extracts made from the commentaries on these Sections will suffice to show their import

"The foregoing Sections of the Code embrace points in ethics and etiquette, the propriety and importance of which no member of the medical profession will undertake to deny Their observance is essential to the harmony, good fellowship and mutual cooperation of practitioners of medicine, thereby contributing to the honorable character of the profession, to the public confidence in regard to it, and to its usefulness in the cause of humanity The question, however, may be raised, Is it necessary to embody these points in ethics and etiquette in formal rules, that is, would not physicians regulate their conduct equally well without the latter? The affirmative answer to this question would imply that all those admitted to the ranks of the medical profession found 'their expectations of practice upon the extent of their qualifications and not on intrigue or artifice ' No one will venture to claim for all members of the profession that purity and high moral tone which are implied in the affirmative answer to the question It must be admitted that these rules are not infrequently violated Does it follow that the rules are useless? Certainly not The fact only proves that knowledge of rules does not always secure their observance This is true, not alone in medical ethics, but in theology, law and every department of morals That prescribed rules of medical ethics influence more or less the conduct of physicians can not be doubted This is true as regards other duties, else wherefore the propriety of such rules applied, not only to the higher moral relations of human life, but to those of minor importance, and even the trivialities of social intercourse To do away with ethical rules for the reason that they are not always observed would be in opposition to human experience and conducive to anarchy Prescribed rules of conduct are of use by giving distinctness and force to popular sentiment Moreover, the knowledge of rules affects the conduct of those who, not devoid of rectitude, pursue the wrong because they do not know the right Rules thus tend to nullify the temptations and the specious pleadings of apparent self-interest

"It has been argued for the inutility of rules in medical ethics, that penalties for their non-observance are with difficulty instituted and enforced This argument is as illogical as in its application to all moral duties It is a feature of the Code of Medical Ethics that it takes no cognizance of penalties for violations of its requirements It appeals solely to the judgment and conscience Measures for the enforcement of its rules are left entirely to the discretion of local associations "

SEC 9—is commented on by the author with the same judicial ability as the other Sections of this and all of the Articles of the Code

ARTICLE VI —*Of Differences Between Physicians*

SECTIONS 1 AND 2 —The following, among the comments on these two Sections, are well worthy of reproduction in this place to refresh, in the minds of physicians, the salutary maxims set forth in this part of the Code and in the commentaries

"Harmony among physicians is most desirable, not alone for the comfort of those concerned, but as conducive to the honor and usefulness of the medical profession It is essential to cooperation in medical consultations, in measures for public health, etc For the maintenance of harmonious relations, local associations are important In places of small or moderate size these associations should embrace all the members of the profession of the community who are in good standing In this way are avoided the evils of cliques, which are to be deprecated The local associations should have more or less of a social character They afford opportunities for intimate acquaintance, for the explanation of misunderstandings and for their prompt adjustment Observation will show that, in the places in which such associations exist, much more harmony and good fellowship prevail than in places in which physicians are not brought together in social intercourse Controversies and contentions, however, can not always be avoided They will be terminated with the more difficulty the longer they continue The Code of Ethics, therefore, judiciously instructs that, if not terminated immediately, they are to be adjusted by arbitration "

ARTICLE VII —*Of Pecuniary Acknowledgments*

SECTION 1—This short but important article receives a full commentary of a character such as could have been given only by a physician of the long and extensive experience of the venerable author The following extracts give some idea of the nature of the comments 'By no process of distortion can this Article of the Code be made to inculcate a combination, after the manner of trades unions, to establish and enforce a certain rate of wages for medical services It is plainly important, for the convenience of patients, that in every community there should be an understanding as to the customary fees for the different kinds of service which medical men are expected to render Exclusive of exceptional instances, the adoption of some general rules, and their recognition within and without the profession, obviate the necessity of questions, explanations, and discussions, which are often embarrassing and disagreeable "

"The poor policy of under-bidding other physicians, for the sake of gaining practice, would probably deter those from pursuing it who might be so inclined Few patients are disposed to select a medical adviser because he places a low pecuniary valuation on his services The Code by no means interdicts deviations from the general rules according to varying circumstances It is to the honor of the profession that the circumstances are few in which efforts for the relief of suffering and the preservation of life are withheld on account of the inability to make an adequate pecuniary acknowledgment The circumstances which lead physicians from sympathy to deviate from the general rules are often not apparent to others Few persons outside of the medical profession are aware of the extent to which the services of its members are freely rendered, with but little or no compensation, hence, one reason for an exaggerated estimate of the incomes of those largely engaged in practice, and for the fact that the majority of practitioners, after a long professional career, leave but little property "

"Extraordinary services rightfully claim deviations from the general rules in respect of fees Detentions or constant attendance, involving sacrifice of interests, unusual fatigue, or impairment of comfort, and visits requiring traveling and absence from home, are in this category No one but the physician himself can place a valuation on such services, and it is his right to do this, provided there be an understanding before the services are rendered "

CHAPTER III

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION

ARTICLE 1—*Duties of the Profession to the Public*

SECTIONS 1, 2 AND 3—The commentaries on the several Articles and Sections of this chapter are of the same high order as those of the first and second chapters They appeal to the noblest sentiments of the ideal physician and sanitarian, they point out most distinctly the reciprocal relations and duties of the profession and public, and they expose the fallacious reasoning of those who assert that the public has nothing to do with, and should neither know of, nor care about, the laws governing the conduct of physicians The following extracts from the comments on the first three Sections of Article 1 will serve to exemplify their tone

"The more physicians are led to regard medicine in its humane and noble aspects, the more they are reconciled to its hardships, and the more they are incited to do all in their power to maintain its character and usefulness The feeling that honor is reflected by membership of a profession which professes to be governed by the Code of Medical Ethics conduces to a high moral tone, and it is in this way that the Code is of great service It is a beautiful feature of the Code that it aims solely at the influence of its ethical rules on the mind irrespective of any penalties It is based on the principle that moral rectitude is promoted more by fostering upright sentiments than by the punishment of offenses

"The profession is entitled to whatever of praise belongs to courage in the performance of professional duty, albeit the courage has no recompense beyond the satisfaction of having followed the dictates of duty The physicians' roll of honor is the list of those who have died in the performance of professional duty The history of every epidemic disease furnishes such a list The risk of life was simply a duty, but who will refuse to accord to it nobleness? Who would remove from the Code that portion which enjoins upon physicians that, when pestilence prevails, 'it is their duty to face the danger, and to continue their labor for the alleviation of suffering, even at the jeopardy of their own lives?'

"A broad distinction, in respect of pecuniary acknowledgments, exists between the duties which every physician owes to the public in behalf of matters embraced in preventive medicine and the duties connected with legal administration of justice Whenever called upon by legally constituted authorities to give advice or expert testimony at coroners' inquests or in courts of justice in relation to medical questions, physicians should be paid for their services In view of the services rendered to the public without compensation, for those just referred to there should be adequate pecuniary acknowledgments Investigations in cases of supposed insanity, of homicide by poisons or other means, etc, and postmortem examinations, made under instruction by authorities, claim ample remuneration There is no good reason for physicians being expected to perform these duties gratuitously Much injustice is often done to the medical profession in regard to these duties Physicians should not fail, from a sense of delicacy, to assert their rights in this regard and they should endeavor to lead the public to recognize the propriety of so doing "

SEC 4—The commentator treats the subject of this Section with his wonted skill and sound judgment, tells many solemn truths in a simple style, without the least semblance of magisterial assumption, touching the sundry forms of charlatanry and their dupes, and comments briefly, but with energy, upon the evils of proprietary medicines and the no lesser evil effect of physicians' certificates indorsing these and other advertised medicinal agents

ARTICLE II —*Obligations of the Public to Physicians*

SECTION 1—It is no fault of the public if there still exist many errors respecting the characteristics and moral status of regular physicians and the nature of the professional relations they bear to individuals and to the community, for, little if any information thereon has appeared in lay magazines The time seems to have come to furnish the American people with this much needed information which they have every right to demand of the profession, and until it is given, the people will likely continue to look upon the regular profession as illiberal and unprogressive, and upon medicine as kept, by its devotees "for their own selfish ends," in a state of occultation to the great injury of the public

"A just appreciation of medical qualifications by the public is desirable as an incentive to members of the profession to aim at these, and as a reward for their possession In these points of view, it is discouraging to the votaries of true science for the assumption of ignorance and empiricism to be successful in obtaining popular distinction The public can not be expected always to judge correctly between real qualifications and false assumptions True distinction in medicine, therefore, must be based on the opinions of unbiased medical men

"The apathy and indifference on the part of the public to medical education is a singular incongruity, in view of the immense importance of well-educated physicians to every community The interests of medical education are left almost wholly to physicians, whereas these interests concern the public vastly more than the medical profession If the public could be made to see this subject in a proper light, there would be no lack of accommodations, provisions and appliances for all the departments of medical instruction "

In his concluding remarks the commentator says "The proposal to write commentaries on our National Code of Ethics may have conveyed to the minds of many an idea of presumption The writer of the foregoing commentaries indulges the hope that their perusal has not sustained this idea, inasmuch as he has not ventured to take issue with the Code on any important point except one—namely the ground for refusing medical consultations Nor has he assumed to be an expounder of the Code, but only to supplement comments in conformity with the spirit which pervades it In fact, a leading motive has been to excite the attention of medical, and, perhaps, also, to the same extent, non medical readers, to the Code itself There are many members of the medical profession who have never read the Code with that degree of interest which it claims, and there are some who have never read it These assertions are based on information obtained by personal inquiries It is safe to say of the public that not one in a thousand knows anything of its character and provisions "

Finally, the author made, in vain, the following appeal to those who wished to abolish the Code "The action which substituted a new code for our time honored National Code of Ethics has brought upon the profession of the State of New York a great disaster It substituted for harmony, dissension, with all the evils flowing therefrom—evils affecting not only the profession, but communities Has this result been sufficiently considered? Granting honesty of purpose to those who originated and who have carried on with persistent efforts the movements against the National Code, is it not the part of wisdom to pause and reflect upon these evils? Should not a measure fraught with such consequences command, to say the least, a large majority in its favor? Would it not be becoming in the ardent advocates of the measure to recognize the propriety of some approach to unanimity of opinion, and for this end be content to await the result of a fuller discussion and a longer period of deliberation?"

The appointment, in 1847, by the American Medical Association, of a committee of wise and learned men to frame a code which might serve as a guide for professional conduct, was a boon to the profession and to the public This committee consisted of Drs Isaac Hays, Emerson and Bell of Pennsylvania, Dr Alonzo Clark of New York, and Dr Arnold of Georgia, who, after examining many codes of medical ethics, adopted by local societies, and finding that they bore a close resemblance to each other and that they were derived from Percival's code, abbreviated the English code and adapted it to the use of the American medical profession The adoption of this code has had the much desired effect of raising the standard of medical morals and thought in the United States Those least familiar with its provisions are its worst detractors who wish to destroy this monument of wisdom and justice which, with Dr Flint's commentaries, is worthy of being translated into every foreign language, and of being published in every newspaper in the world, in order that all men, who can read, may know what scientific medicine means, and what are the reciprocal obligations of physicians and the public This would operate more effectively than anything else toward the extinction of medical charlatanism and of the many kinds of irregularities practiced under the guise of benefiting humanity

NECROLOGY

Dr T J Fentress of Princess Anne County, Maryland

Dr Lucius F Billings, for nearly fifty years in medical practice in Barre, Mass, recently died at the age of 72 years

Dr D V Durand died at his home at Newington Junction, Conn, December 5 Dr Durand has lived in this place about fifteen or twenty years

Dr James S Conover, aged 45, died at Red Bank, N J, of Bright's disease He was a well-known practitioner throughout the country He leaves a widow

Dr John Robbins of Norridgwock, Me, died at his home November 29, after a long illness, aged about 70 years He has been a member of the Maine Legislature and a member of the United States Examining Board of Pension Physicians

Dr N G H Pulsifer of Waterville, Me, died December 2 of pneumonia, aged 69 years He had been in practice forty-one years He was for many years President of the People's National Bank and an active Republican He leaves a widow, two sons, who are physicians, and two daughters

Dr William Notson died at Philadelphia on December 9, aged 87 years He was one of the oldest practicing physicians in Philadelphia, and was a native of that city and a graduate of Jefferson Medical College, class of 1832 When the cholera was prevalent Dr Notson was District Physician of Southwark, and during the last yellow fever epidemic rendered valuable assistance in the same district Three married daughters survive him The late Major William M Notson, of the United States Army, one of the Surgeons who made the autopsy on the body of President Lincoln, and the late Charles B Notson a leading druggist of St Louis, Mo, were his sons

Dr Joseph H Baker, one of the most eminent physicians of Lafayette, Ind, was run down by a locomotive three miles south of Lafayette Saturday, December 6 The base of the skull was fractured and he died one hour afterward He was in the neighborhood of thirty seven, and was giving his attention to gynecology as a specialty His father, Dr Moses Baker, died several years ago, being at the time of his death one of Indiana's most eminent surgeons He made the second Cæsarean section ever made in America Dr Joseph Baker was a man of sterling worth and upright moral and Christian character He graduated at Jefferson Medical College in 1877, and commenced practice with his father at Stockwell, Ind Desiring to give his attention to the surgery and diseases of women, he removed to Lafayette less than a year ago At the time of his death he was President of the Tippecanoe County Medical Society and a consistent and active member of Trinity M E Church Ten years ago he married Miss Belle Miller, who survives him, with a son 9 years old

Dr William F Hutchinson At a meeting of the Executive Council of the American Electro-Therapeutic Association, the following resolutions on the death of Dr William F Hutchinson of Providence, R I, were unanimously adopted

Whereas, It becomes our painful duty to announce the death of Dr William F Hutchinson, one of the Foundation Fellows of the American Electro-Therapeutic Association, as well as the First Vice President of the same, and

Whereas, In his death we lose a warm and faithful friend, a valued associate and an accomplished member of the profession, therefore be it

Resolved, That this Association desires to place on record its appreciation of his genial spirit, his active coöperation in the work of the Association, and of his deep interest in the scientific questions relative to his chosen profession

Resolved, That we express our sincere regret and heartfelt sorrow at his death

Resolved, That we tender to his sorrowing family an expression of our profound sympathy in their great loss

Resolved, That a copy of these resolutions be sent to the bereaved family, to the medical journals and that they be spread upon the minutes of the Association

Augustin H Goelet, M D
W J Morton, M D
G Betton Massey, M D Executive Council
Robert Newman, M D
Charles R Dickson, M D

Wm J Herdman, M D, President
Margaret A Cleaves, M D, Secretary
New York, N Y, Dec 13, 1893

Dr Joseph B Browning died December 10 at St Joseph, Mo, where he had gone several weeks ago for medical treatment The immediate cause of his death was pneumonia Dr Browning was about forty-five years old He was born in New York, and came to Kansas City from Central Illinois in 1882 For several years he was editor-in chief of the *Medical Index* During the same time he practiced the profession of medicine and was Professor of Diseases of the Nerves in the University Medical School of Kansas City Of late years he had abandoned his profession of medicine and had devoted himself to teaching For four years he was Professor of Ancient Languages in the Kansas City High School He had been in poor health for some time, and one year ago resigned his position and went to Michigan, hoping that rest and change of climate would help him He returned here in June apparently better, and was reëlected to his place in the schools, but resigned and went to Mexico before the fall term began He returned from Mexico about five weeks ago and immediately went to St Joseph where he entered a sanitarium Dr Browning was one of the most accomplished scholars in the city He was a graduate of Harvard College and Rush Medical College He traveled in Europe ten years studying medicine and languages He devoted several years to the study of medicine in Vienna and Paris, and in the latter place was a student under the celebrated Charcot He was a splendid linguist, being master of French, German, Spanish and Italian, as well as the ancient languages He was one of the best Greek scholars in the country, and one year ago was tendered the Greek chair in the Chicago University He declined the offer on account of his health

THE
Journal of the American Medical Association
PUBLISHED WEEKLY

SUBSCRIPTION PRICE, INCLUDING POSTAGE
PER ANNUM, IN ADVANCE $5 00
SINGLE COPIES 10 CENTS

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
NO 68 WABASH AVE CHICAGO ILLINOIS
F J REBMAN LONDON AGENT, 11 Adam Street STRAND LONDON
W H LOWDERMILK & CO WASHINGTON, AGENTS

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J DUNGLISON, M D , Lock Box 1274 Philadelphia Pa

SATURDAY, DECEMBER 23, 1893

VIVISECTION

Persons who take extreme views of questions are said to have their uses They present their side of the question with a terse vigor which compels attention to their ideas This has its advantages, because, like rocks in the bed of a stream, they serve to stir up the current of thought and prevent its running on with too great uniformity and also prevent the possibility of stagnation But, they are rarely, if ever right They build a Chinese wall of exclusiveness and positivism about themselves and refuse to listen to the evidence of others This seems to be especially true of the Antivivisection Society and their methods and exhibit at the World's Fair, together with their so called arguments, better termed indefensible statements and unjustifiable inferences relative to the cruelty and barbarous practices of vivisectionists, and its want of gain to the profession and the world One of the editors of one of our best daily papers, in a recent article says "No physician or surgeon maintains that any appreciable gain in the art of healing has yet been made by vivisection " He further says "For my own part, I am more than willing to forego, as to myself and those dear to me, any possible prolongation of life, and any relief of its ills, which might come from the fiendish, debasing, shameful practice of inflicting on lower animals, pangs to which those of the rack, the boot, the thumbscrew, and even the stake itself could show no parallel " "Life and ease are not worth the having at such a price "

Before discussing the question of vivisection, let us first remind him that, as was long since so forcibly pointed out by DR TONER of Washington "*The assumption that any one has the right to neglect his own health at pleasure, is false in morals, and equally in opposition to social and statutory laws* "

To decide this question rationally, we should ask, and answer, the following questions

What is vivisection? How is it performed? What has been gained by it? Before defining vivisection, we should carefully distinguish between vivisection, and "cruelty to animals," as recognized by the law. Vivisection literally means the dissection of living animals, but is a term usually employed to denote all those operations or experiments on living animals or organisms for the purpose of physiologic investigation Every operation on the living human body is a vivisection Every operation on the lower animals, whether a cutting operation, the injection of a drug to study its physiologic operation, the injection of, or inoculation or vaccination with any germ or its product is a vivisection The slaughter of animals for food and the destruction of other useless harmful animals or organisms, is a vivisection. Every investigation in bacteriology which involves the destruction of microorganisms is a vivisection. Either this, or else we must accept the other horn of the dilemma and say that consciousness has its seat in the cerebrum Our reply to this is that if this is true, then all those organisms devoid of a cerebrum are incapable of feeling pain, and, therefore all experiments upon them are not cruel, and cause no pain.

There are but three States in the Union in which the statutes contain any reference to vivisection. These are New York, New Jersey and California. The law of New York is as follows

"If any person shall torture, torment, deprive of necessary substance, or needlessly mutilate or kill, or cause or procure the same to be done, to any living creature, every such offender shall, for every such offence be guilty of a misdemeanor ' 'Then follows this Section in regard to vivisection

" Nothing in this Act contained shall be construed to prohibit, or interfere with, any properly conducted scientific experiments or investigations, which experiments or investigations shall be performed only under the authority of the faculty of some regularly incorporated medical college or university of the State of New York "

In New Jersey and California, the laws are similar. Nearly all the other States have laws in regard to cruelty to animals

Thus vivisection is lawful under the authority mentioned, and when " properly conducted "

This brings us to the question, How is vivisection performed? Under all circumstances when mutilation and cutting is resorted to, anesthetics are used.

Where drugs are given for the purpose of studying their physiologic effects, and where the germs of disease are used to vaccinate or to inoculate the animal, anesthetics are not employed The physiologist and physician is not a fiend incarnate, delighting to revel in blood and torture, as the antivivisectionist would have us believe

Let us now consider the third question .What are the results of vivisection? What is the gain to humanity? Leaving out the question of the slaughter of animals for food, and the destruction of useless or harmful animals and organisms, we have the following

Vivisection made possible the discovery of the circulation of the blood, this being the most important discovery in the whole range of biologic science, and without the knowledge of which, physiology would have advanced but little, the old theory of humoral pathology could never have been replaced by the modern, rational theory of cellular pathology of VIRCHOW, the physiologic action of drugs would have been a matter of empiricism, and rational therapeutics impossible

Vaccination next attracts our attention This is one of the crowning triumphs of vivisection The first, and all subsequent vaccinations were vivisections, and the preparation of every ' point" of non-humanized vaccine virus is the result of a vivisection on one of the lower animals The most remarkable vivisection of modern times was conducted at Milton, Mass , in the year 1809 Twelve children were vaccinated, and afterward taken to a hospital and inoculated with smallpox They were quarantined at the hospital from July until October, and not one of them was affected by the inoculation of the smallpox virus The committee in its report says, after speaking of the efficacy of vaccination "That it is a blessing as great as it is singular in its kind, whereby the hearts of men should be elevated in praise to the Almighty Giver"

It remained for DR CORY of England, to prove by a vivisection upon himself, that syphilis may be transmitted with the vaccine virus, thus proving the advisability of using only the bovine virus Against the use of the bovine virus it is urged that the heifer is prone to tuberculosis, but she is immune against syphilis, and it *has never been proved that tuberculosis has been transmitted by vaccination* It is estimated that at the present time, there are twenty millions of people vaccinated annually, and that the death rate per thousand from smallpox is only one-twentieth what it was before vaccination was introduced

And yet, the antivivisectionists, while denying the beneficent results of vivisection, and while claiming to be willing to forego any benefits to be derived from it, are loud in their insistence on having vaccination performed, and that their children be vaccinated with bovine virus

The great progress made in the surgery of the brain, by means of which much knowledge has been gained, suffering averted and lives saved, has been made possible by vivisections upon dogs and monkeys and by operations on the human being

The same is true of abdominal surgery, where it was shown by PARKES, as the result of operations upon dogs, that wounds of the intestine are operable, and by SENN that by means of the hydrogen test we may know whether the intestine is perforated or not

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More cases of smallpox have been reported in the city of Chicago during the past month than for the same time for the last two years The control of the disease since 1883 has been very effective, and there have been years when not a single death occurred This immunity from the disease resulted in neglect of vaccination, which with the great increase of population and of visitors to the World's Fair, are no doubt the cause of the present increase It is fortunate that this increase did not occur during the Exposition, as if it had smallpox would have been distributed throughout the United States So far we have only learned of one instance in which a visitor contracted the disease, from which the group of cases near Mascoutah, Ill , resulted Every effort is being made to control the disease

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The Ohio State Board of Health has issued an order that no pupils should be admitted to the public schools unless protected by vaccination, and on the 14th inst , the New York Board of Health made vaccination compulsory It is clearly the duty of all medical men to encourage vaccination and to promptly report all and even suspicious cases that come under their observation to the health authorities Prompt isolation, vaccination and re-vaccination of all exposed, and the thorough disinfection of the surroundings is the only way to control the contagion

CHOLERA

Cholera is still prevailing at Constantinople, and the expert who was sent from Paris at the request of the Sultan to assist in controlling the epidemic has died Deaths still occur in the Island of Teneriffe This outbreak was caused by the Italian steamer that had cholera on board and was not allowed to land at Rio Janeiro Upon her return she stopped at the Island for water and provisions What recompense can this steamship company make to these unfortunate people? More care should have been taken at Genoa before the steamer started Salonica in Spain is the latest point where cholera is reported

SHOULD AN EXCEPTION BE MADE AS TO ERGOT?

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"That you shall not prescribe, advise or give any drug or medicine, or other agency—excepting possibly *some preparation of ergot* which, however, must never be given before the birth of the head of the infant or a cathartic on the second or third day after delivery—to a lying-in-woman or to the infant, or to any other person or persons, under penalty of not only losing this license but also of prosecution under this Midwifery Law as well as under the Medical Law of 1890 "

The possible exception of some form of ergot will, we judge, be a hazardous experiment with the midwives of New Jersey unless they are much better than those found elsewhere If those midwives may be intrusted with ergot, why not let them have the right to use opiates and "soothing syrups" containing morphia?

HIGHER MEDICAL EDUCATION

We noticed last week in our news columns that Rush Medical College of Chicago, had decided to require a four years' course from students matriculating from and after 1894 This school has heretofore enacted that its annual courses should consist of eight months, so

Let us now consider the third question What are the results of vivisection? What is the gain to humanity? Leaving out the question of the slaughter of animals for food, and the destruction of useless or harmful animals and organisms, we have the following

Vivisection made possible the discovery of the circulation of the blood, this being the most important discovery in the whole range of biologic science, and without the knowledge of which, physiology would have advanced but little, the old theory of humoral pathology could never have been replaced by the modern, rational theory of cellular pathology of Virchow, the physiologic action of drugs would have been a matter of empiricism, and rational therapeutics impossible

Vaccination next attracts our attention This is one of the crowning triumphs of vivisection The first, and all subsequent vaccinations were vivisections, and the preparation of every ' point" of nonhumanized vaccine virus is the result of a vivisection on one of the lower animals The most remarkable vivisection of modern times was conducted at Milton, Mass , in the year 1809 Twelve children were vaccinated, and afterward taken to a hospital and inoculated with smallpox They were quarantined at the hospital from July until October, and not one of them was affected by the inoculation of the smallpox virus The committee in its report says, after speaking of the efficacy of vaccination "That it is a blessing as great as it is singular in its kind, whereby the hearts of men should be elevated in praise to the Almighty Giver"

It remained for Dr Cory of England, to prove by a vivisection upon himself, that syphilis may be transmitted with the vaccine virus, thus proving the advisability of using only the bovine virus Against the use of the bovine virus it is urged that the heifer is prone to tuberculosis, but she is immune against syphilis, and it *has never been proved that tuberculosis has been transmitted by vaccination* It is estimated that at the present time, there are twenty millions of people vaccinated annually, and that the death rate per thousand from smallpox is only one-twentieth what it was before vaccination was introduced

And yet, the antivivisectionists, while denying the beneficent results of vivisection, and while claiming to be willing to forego any benefits to be derived from it, are loud in their insistence on having vaccination performed, and that their children be vaccinated with bovine virus

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This advance in medical education will alike gratify the members of the American Medical Association, the Alumni of the College, and friends of higher medical education everywhere

OPINION EVIDENCE BASED ON CONDITION OF BROKEN BONES

A somewhat novel application of the rules governing the admissibility of expert testimony, arose in a case where a man was injured by what was claimed to be the negligent condition of the landing place under a fire escape A surgeon, presumably having a knowledge of the anatomy of the human body, the strength and position of the bones of the leg, not common to laymen, and having the advantage of a personal examination of a leg after it has been injured, is properly entitled to give his opinion as an expert, holds the General Term of the Supreme Court of New York in the case of Johnson v Steam-Gauge & Lantern Co, decided Oct 20, 1893, that, judging from the condition of the broken bones, the foot of the broken leg struck upon a sloping object and that the heel of the foot struck the object first, before the ball of the foot struck, and that the body of the person was in an upright position when he fell

REQUIRING PRODUCTION OF PRESCRIPTIONS BEFORE GRAND JURIES

A law which provides that druggists shall carefully preserve all prescriptions compounded by them or those in their employ, numbering, dating and filing them in the order in which they are compounded, and shall produce the same in court or before any grand jury whenever thereto lawfully required, and on failing, neglecting or refusing so to do shall be deemed to be guilty of a misdemeanor and on conviction shall be punished by a fine, the Supreme Court of Missouri for the second time pronounced constitutional in the case of State v Davis, decided Nov 9, 1893 But what is of even more interest, is the holding that under such a statute druggists can not be required to produce all of the prescriptions compounded by them or filed by them during any specified length of time, however short, to be inspected and inquired into by the grand jury, no matter what ailments they may have been prescribed for, or for whom, as that would be an intrusion upon their private affairs and business, and without warrant of law A subpœna to compel the production of prescriptions, even in a proper case, should describe them with some kind of particularity

Blank Applications for membership in the Association, at the Journal office

ASSOCIATION NEWS

Arrangements are being made by the Journal for an Association train from Chicago to San Francisco Details will be published later

Section on Dermatology —We regret that repeated search has not enabled us to find the papers relating to the Section on Dermatology, among the other papers of the Association Gentlemen who contributed to this Section at the Milwaukee meeting having duplicates of their papers, or abstracts of them, are respectfully requested to forward them to the Journal without delay

The American Medical Association —After a lapse of twenty-four years the American Medical Association will again honor San Francisco with its annual meeting next June

The attendance from the Eastern States will no doubt be many times larger than at the former meeting The medical profession of this Northwest region should unite with our California brethren so that our visitors will feel that they are being welcomed by the physicians of the whole Pacific coast

We can show our interest in the Association by becoming members in advance of the coming meeting, and then our greeting to our brothers from across the continent will be more cordial for we will feel that we have a double interest in them

Any member in good and regular standing of any State or county society can become a member of the American Medical Association by application to the treasurer, accompanied by a certificate from his local society

Each member will receive the Journal of the Association, which the trustees aim to make the best medical weekly in the country

Application blanks may be obtained by sending address to Dr J B Eagleson, Burke Building, Seattle, Wash —*Medical Sentinel*, Portland, Oregon

Change of Date of Meeting—Official Notice —The following notice appears in the Association Journal over the signatures of the President and Secretary "In order to enable the State Medical Societies to send instructions as to their action in the matter referred to them by the American Medical Association at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the Association at San Francisco has been changed from the first Tuesday in May to the first Tuesday in June, 1894" As we have already stated, a change in the date of the meeting had been urged, but it was supposed that this would still be in May The date now announced is rather later than we would have selected for seeing California to advantage. Unless the season be a late one the green refreshing garb of spring will have faded to the sunburnt tints of our rainless summer, and in the interior hot days may be encountered Sacramento, however, will be looking her very best, for in no month more than in "the month of roses" does the Capital show to such advantage As for San Francisco, the months or seasons make no difference there The climate, or rather weather, is much the same at all times It is a good, hard working vigorous and stimulating atmosphere, but more than this it would not be truthful to state —*Occidental Medical Times*

SOCIETY NEWS

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS, ROME, MARCH 29—APRIL 5, 1894

Rome, Nov 16, 1893

My Dear Sir and Esteemed Colleague —I have the honor to inform you, that the Executive Committee, in its session of the 12th inst, has established, that the XI International Medical Congress, which had been postponed by deliberation of the 2d August, 1893, until April, 1894, shall take place in Rome from the 29th March until the 5th April, 1894

The Committee is very glad to have been able to satisfy thus the wish of the majority of those foreign colleagues, who had been requested to give their opinion on this purpose

Having thus had the pleasure to give you officially this information, I beg your leave to request you to render it public in the manner which you will judge best for the interest of the meeting, and to ascertain in the meanwhile the number of colleagues of your country, who will attend in consequence of the steps taken by the Committee, for each of them convenient accommodation at usual prices will be provided

The circumstances beyond our control, which had forced us to postpone the meeting, existing no more, the organizing action for the Congress enters on a period of renewed activity, and the Organizing Committee flatters itself to find you, my dear sir, as well as the colleagues of your country its zealous collaborators, now and in the future, as you have been, with so much success, for the past

Yours faithfully,
Prof E Maragliano, M D , Sec'y General

To Augustus P Clarke, A M , M D ,
Cambridge, Mass , U S A

In consequence of the adjournment of the Congress, the Articles 1 and 2 of the statute have been altered as follows

Article 1 The XI International Medical Congress will be inaugurated in Rome on the 29th March, 1894, and will close on the next following 5th April

Art 2 Papers to be read before the Congress should be announced not later than the 31st January, 1894 The title should be accompanied by a very short précis of the paper and by the conclusions, the latter will be printed by care of the Board and distributed among the members

Papers announced after the 31st August, 1893, will be marked in the provisional program with an asterisk

The provisional program will contain also those previously announced papers, which have been published in scientific papers after the adjournment

The railway companies have established, that the reduction of fares should be available from the 1st of March till the 30th of April, 1894

The traveling tickets of membership and railway passes will be sent by the Secretary General's office to each member enrolled before the 14th of February, 1894

After this date the said papers should be applied for to the following gentlemen

In Austria to Prof H Nothnagel, Vienna
In Belgium to Prof Thiry, Bruxelles
In Bulgaria to Dr A Puscoullieff, Sophia
In Denmark to Prof C Lange, Copenhagen
In Egypt to Dr Hassan Pacha Mahmoud, Cario
In Egypt to Dr Onofrio Abbate Pacha, Cairo
In France to Dr Marcel Baudoin, Paris
In Germany to Dr Carl Posner, Berlin
In Great Britain to Dr G H Makins, London
In Great Britain to Dr G A Gibson, Edinburgh
In Great Britain to Prof Sir William Stokes, Dublin
In Luxemburg to Dr Paul Koch, Luxemburg
In Malta to Dr G O Galea, La Valletta
In Norway to Prof S Laache, Christiania
In Netherland to Prof B I Stokvis, Amsterdam
In Poland to Prof Cybulski, Krakau
In Portugal to Prof J T de Sousa Martins, Lisbon
In Roumania to Dr C D Severeanu, Bucarest
In Russia to Prof V Pachoutine, St Petersburg
In Servia to Dr V Subboticz, Belgrade
In Spain to Prof J Calleja y Sanchez, Madrid
In Spain to Dr A Espina y Capo, Madrid
In Sweden to Prof F Holmgren, Upsala
In Switzerland to Prof Th Kocher, Bern
In Switzerland to Prof D'Espine, Geneva
In Turkey to Dr van Millingen, Constantinople
In Turkey to Dr H Perera, Salonik
In Hungary to Dr L Csatàry de Csatàr, Buda-Pesth
In Tunis to Dr C Funaro, Tunis

The first edition of the provisional program is to be printed and will contain details concerning the Congress, and a list of all the papers announced till Nov 15, 1893

It should be well to remember the following Articles of the statute

Article 2 All physicians are admitted to have a part in the work of the Congress, provided they have satisfied the conditions of inscription, and obtained the required ticket of membership

Art 3 The doctors of other sciences who, for their special studies, should have an interest in the work of the Congress may be enrolled with the duties and rights of the members of the Congress who are doctors of medicine, being entitled to partake in the work, either by reading papers or by having a part in the discussion

Art 4 The admission fee to the Congress is fixed at twenty five francs—one pound sterling, it entitles to a copy of the Report of the Congress, which will be forwarded to the members as soon as it is published

Art 17 The persons who, not being comprised in the Article 3, are interested in the work of a Section, may obtain admission by consent of the President of the Congress

Such persons will receive a special ticket and will pay the admission fee like the other members, being entitled, however, to a copy of the Report of the Congress

The persons thus admitted to the Congress may speak neither in the general sittings nor in the sittings of the Sections to which they are not enrolled

Art 18 The students of medicine may be invited or admitted by the President to attend the sittings, but only as hearers

They must obtain a special ticket which will be granted them without payment

Members may apply to the Secretary General's office for railway passes for their wives and adult members of their families, the latter may be enrolled on payment of a fee of ten francs

Medical gentlemen and all persons who wish to take part in the Congress are requested to give their names as soon as possible, writing for this purpose to the Secretary General of the XI International Medical Congress, Genoa

Fees should be paid by post order or draft to the order of the Treasurer, Prof L Pagliani, M D , Director General to the Office of Public Health, Home Department, Rome, Italy

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College of Physicians of Philadelphia

SECTION ON ORTHOPEDIC SURGERY

Meeting held on November 17, 1893

Concluded from page 944

RESECTION OF A RIB FOR EMPYEMA FOLLOWED BY LATERAL CURVATURE OF THE SPINE

Dr G G Davis exhibited a boy in which two ribs had been resected and there was resultant lateral curvature He showed an apparatus which had been adjusted for the purpose of reducing the projection arising therefrom The jacket was adjusted so that it made pressure on the pelvis, in the axillary fold, and counter pressure on the opposite side by the pad

Dr DeForest Willard—I should like to ask Dr Davis whether I understood him to say that the deformity would probably grow worse as time goes on? My experience is that such deformities tend to improvement I had occasion a few weeks ago to examine a case upon whom I operated in 1872 for empyema, a girl then five years of age Suppuration continued for six months and there was great deformity at the time, yet the patient has become absolutely straight and I had difficulty in determining upon which side the operation had been performed In a number of other cases, the same result has been obtained, and the improvement has been very marked under exercise and expansion of the lung, which probably is the most important element In regard to the use of apparatus I have to say that I have never seen the deformity following empyema benefited by any form of appliance I rather look upon it as injurious by interfering with expansion of the lungs I have always used some form of exercise with marked benefit

Dr H Augustus Wilson—I would like to say that it appears to me that this case has reached the stage in which there are present all the conditions of idiopathic lateral curvature and marked rotation with the usual distortion of the thorax It is a question whether apparatus does not tend to still further produce muscular atrophy, and whether the chest will not decrease in size, the lateral curvature and rotation becoming more pronounced The question is not settled in my mind whether most of the muscular atrophy is produced by scoliosis or by apparatus This particular apparatus has, in my judgment, one serious objection, the straps passing over the shoulders The shoulders are brought into line by simple downward pressure, even when there is a crutch resting upon the hips Mothers will loosen the straps around the waist to give the child comfort and the apparatus is therefore sure to drag still further upon the shoulder straps The shoulder straps prevent a displacement of the apparatus, even when the lower bands are loose, and therefore they should be dispensed with It is my experience that apparatus too often only conceals the deformity beneath, but does very little in the way of correction

Dr T S K Morton—I do not think I have had a case which improved under apparatus I have obtained good results from the application of head extension at night with suspension at times during the day In regard to the use of a bicycle, of which Dr Taylor speaks, it is a question in my mind whether this is wise, as already we are noticing in literature, reference to a condition of kyphosis to which this kind of exercise gives rise

Dr J B Deaver—My experience fully accords with Dr Wilson's I have operated upon a large number of cases, many of them tuberculous, others resulting from pleurisy Relative to the lateral curvature which follows, I would say that most cases recover I advise against appliances under the circumstances, I believe it to be a serious matter to interfere with chest expansion Ordinary appliances are misleading and, to my mind, do harm, often resulting in paraplegia If support is required, my plan is to use plaster-of-paris bandage the length of the spine, and at the end of a month I replace it by another and the patient is thus straightened every time the bandage is altered Those of us who are familiar with Dr Adams' dissertations, know that he lays great stress upon this point, unless there is actual disease of the vertebral column

Dr G G Davis—The deformity in the case shown to night has been more marked lately than it was a few weeks ago I do not think that it will increase as time goes on, after sound healing has taken place and the lung begins to expand, but I am of the opinion that an apparatus for the resultant curvature is of marked benefit in the treatment for the condition as now present Some of the remarks made to-night apply to cases of pure lateral curvature and not to such a condition as that of the case exhibited Dr Deaver refers to paraplegia following the use of apparatus To this I would say that perhaps paraplegia may follow lateral curvature, but I have never seen it as such a result As to the question of the use of a plaster jacket or brace, that is largely a matter of opinion, I do not think that this question has been definitely settled yet When we find such men as Bradford of Boston, and others describing them, one can not regard apparatus as always out of place

In regard to this special case I do not see that healing would be delayed by an appliance There is a projection on one side which is quite marked I can see how expansion would be hindered by having the chest encircled by bandages, but in this jacket there is no constriction of the chest It is the pelvis which is embraced, and pressure is made over the projecting side and not the constricted one Dr Wilson's suggestion in regard to the shoulder straps is a good and practical one, and I will watch the case to see that displacement does not occur I would not, by any means, urge the continual use of such apparatus, but in the early period of recovery where the sinus has not healed, or just healed, I think it is good treatment, as without it, I I think, in a comparatively short space of time, the deformity becomes more marked I do not believe in substituting for exercise any mechanical appliance because I think nothing can take its place Where an apparatus is supported from the hips, and where there is no pressure made on the contracted chest, and when apparatus is capable of removal, if so desired, for exercise, I do not think it would at all hinder the recovery of a case

Dr W J Hearn reported a case of suppuration of knee-joint that he operated upon by free incision and washed out with 1-2000 bichlorid of mercury solution The patient made a rapid and complete recovery, ultimately obtaining full usefulness of the joint Dr Hearn advocated early and free incision for exploratory purposes, because it enabled the surgeon to effectually evacuate the contents of such an abscess, and prevent its rapid destruction of the joint

Dr J B Deaver opened the discussion —This case is particularly interesting for the reason that last winter I saw, with Dr Lloyd, a case of middle ear disease in which there was pronounced sepsis I opened the abscess and removed pus, this Dr Abbott examined for micrococci, but without finding such bacilli I should rather take exception to Dr Hearn's remarks that he thinks this treatment wise in all cases I scarcely think that in all cases it would give good results

Dr T S K Morton—I hardly agree with Dr Hearn in advocating the use of so strong a solution as 1-2000 bichlorid of mercury My experience is, in using antiseptics in joints, that they are a source of danger, that it is not possible to use such a strong solution without producing adhesions Iodoform appears to me to be the best antiseptic to use, in fact I do not use bichlorid for washing out joints, as I find simple boiled water to be quite effective and without danger of doing harm In using strong antiseptics there is a possibility of producing synovitis

Dr R S Cruice—In May, 1892, I saw a case of a girl age 3 years who had a suppurative knee-joint She had been taken to the University and to the Children's Hospitals and had been told that nothing could be done except to amputate the limb I opened the joint, passed a probe through to the opposite side and then injected the joint with peroxid of hydrogen twice a day At the end of thirty days the wound closed and I applied a splint I did not see the case again until September when the child was running about and appeared perfectly healthy There was perfect motion in the joint

CORRESPONDENCE

How to Manage Criminals

To the Editor —There are symptoms of a "fad" becoming universal in this country This fad is based on the false conclusion that "crime is a result of disease" Men becoming sober and orderly after taking the so called Keeley cure is apparent evidence that the vice, drunkenness, can be cured with medicine, and people who believe in this will say, If one vice can be cured by remedies administered to the criminal, why can not others be cured in the same way? Perhaps ere long it will be fashionable and also legal to send the horse-thief and murderer to the hospital instead of the pen and gallows To enter my objections to this fad is the object of this paper

In evidence that crime is not a result of disease, I will mention the fact that crimes are not so prevalent among the sick as among the healthy The hungry man may steal, not because he is sick but because he is hungry The murderer may slay his fellow-man, not so much because he is sick and seeking relief, but because he is angry and thinks his act justifiable There is a vast difference between *hunger, anger* and *disease* A sick man may commit crime but this is not proof that the sickness was the cause of the crime If sickness was a factor in crime, more people would commit crime when sick than when well, but the opposite of this is true

Nine tenths of the crimes are committed by people who are healthy I do not forget that insane people often commit murder and steal but this is oftener an accident or concomitant than cause of crime The list of criminals will show a *small* per cent of insane people Many criminals plead insanity because (if proved) it will protect them from punishment That there is a great *majority* of *healthy* criminals goes to show that sickness has little to do with crime Evil associations and prison-life are not calculated to improve a man's moral character The object in sending a man to prison is not so much to improve his morals as it is to punish him for crime committed Schools, good society and religious training assist in the way of morality but these are not a part of the penitentiary code The fear of punishment is a great factor in preventing crime, but once let the people understand that the penalty for crime is, to be sent to the hospital where they can have good food, good books to read and a general good time, then Texas would not be large enough to hold the hospitals that would be required for the sick *Kindness* to a criminal is a *premium on crime* No Don't learn too much suddenly The criminal in this country is getting all he deserves in the way of kindness, perhaps too much I once heard a noted cow thief say he was going to plead guilty because the county jail in which he was confined was not so comfortable as his old quarters at the "Pen" I heard a returned convict say that the penitentiary at Jefferson City, Mo, was a much preferable place to his county jail

Philanthropy and charity are well enough in their place, but to treat criminals on the theory that they are only sick people is a dangerous unholy fad, and I hope the medical profession will not assist in promulgating this fraud The Ruler of the Universe (if the Bible be true) says that the wicked deserve *punishment* and the sick deserve *kindness* Let us not get the two decrees mixed Let the criminal stay in his own proper place Care for the sick as heretofore, but please do not 'gush over" in behalf of an undeserving law breaker The way to manage a criminal is to punish him for his crimes, and this is the right and only safe way to manage him To put him on the list of sick people and treat him as such, would impoverish any nation on the globe Down with the fad that crime is a result of disease The idea that the human family has become so sick (or good either) that it deserves only charity is dangerous in the extreme Vice is prevalent and can not be cured by hospitals, kind nurses and learned physicians We, of the medical profession, are entirely out of place when we undertake the care of criminals who are as healthy and strong as we are Let the police, judge and lawyers have their share of work We have finished our work when we have instructed the people how to prevent disease, and have cared for the sick Let us stay in our proper place There is a class of people elected to take charge of the criminals, and we should not meddle when we are not called

W P Howle, M D

Oran, Scott County, Mo

Treatment of Uterine Fibroids

To the Editor —In a recent editorial of the Journal, Dec 9, 1893, on the above subject, three methods of cure were presented "The application of electricity to the growth, the induction of premature menopause by removal of the ovaries and tubes, and the removal of the tumor, either with or without the removal of the uterus and its appendages" While the writer of the editorial took a conservative course in presenting the above methods as old established treatments, it seems to me it would not have made his authority any less comprehensive if he had mentioned the new operations of promise which are now on trial in this country and in Europe, for the difficulty under consideration Ignorance of the subject can not be gracefully advanced by an editorial writer, who of all writers must be abreast of the literature of his subject Therefore I must take it for granted, that the writer simply exercised his editorial prerogative and used his discretionary power in deciding that the subject is not yet ripe for editorial recognition

As a correspondent, however, may I take the liberty of calling your readers' attention to the following facts about the new operations for fibroids of the uterus?

December, 1892, I read a paper before the Chicago Gynecological Society on "A New Operation—Vaginal Ligation of a Portion of the Broad Ligament for Uterine Tumors or Hemorrhage" At that time I read the report of the first two cases operated on This paper was published in the *American Journal of Obstetrics* for April, 1893 At the Milwaukee meeting of the Association, I read another paper on the same subject, in which I reported five cases upon which I had operated This report appeared in the Journal of the Association for Sept 2, 1893 These articles have been quite extensively quoted in several of our best journals

In the *Archiv f Gynekologie*, xliii, iii Hft, p 534, will be found an article by Sigmund Gottschalk, in which he discusses the "Histogenese und Ætiologie der Uterus Myomæ," and in concluding, advises the bilateral ligation of the uterine arteries for incipient myoma

In the *Centralblatt f Gynekologie* No 33, Aug 19, 1892, Kustner reports having operated on two cases of fibroids in which he ligated both uterine arteries from the vagina with good results—the tumors having rapidly decreased in size and the hemorrhage in each case ceasing He refers to Gottschalk's recommendation of the procedure, and criticises him for not describing a technique

In the *Centralblatt f Gynekologie*, No 39, Sept 30, 1892 Gottschalk replies to Kustner, and gives a more detailed description of technique This writer has treated seven cases, two of which had been treated so recently that their evidence for good could not go further than to show the immediate beneficial effect on hemorrhage, which was favorable In the other five cases the tumors have diminished perceptibly in size, and the menstruation has markedly decreased in quantity

My operation differs from that described by the above writers in that besides ligating the uterine arteries, I also include the whole of the base of the broad ligament in such a manner as to include as much of its nerve supply as possible, in order to get a powerful trophic influence Besides including in the ligatures the nerves in *all* cases, in *suitable* and in *desperate* cases the ovarian artery of one side is also tied

The importance of cutting off the nerve supply I do not think can be over estimated Every operator of much experience is aware how a small shock will frequently cause fibroids of the uterus to diminish in size or to disappear entirely A simple exploratory incision, has frequently produced this effect Add to this the severing of their nerve supply and the trophic disturbance can but be great, especially when this is combined with a procedure which suddenly deprives the uterus of two-thirds of its blood supply Then, too, by severing the nerve supply, the apparatus by which a blood draught would ordinarily be made known to distant parts and collateral circulation established, is rendered inoperative For these reasons I insist upon the ligation of all the contents of the broad ligament

I have performed my operation in eight cases All bleeding fibroids, varying in size from the proportions of a three months pregnant uterus to one which extended above the umbilicus In every case, except two, the hemorrhage has ceased promptly after the operation, in these two the cessation was only partial, because the operations were incomplete In *all* cases the menorrhagia has finally been permanently relieved

In the six cases in which time enough has elapsed to judge of results, the tumors have decidedly diminished in size The one which extended above the umbilicus, operated on in January, is now but little larger than a normal uterus These brilliant results have been accomplished too, without the long train of distressing sequelæ which follow the more severe operations of removal of the appendages or hysterectomy

For more detailed accounts of this operation, and the history of the cases, the reader must refer to the literature given in this letter

In the editorials of the future, it seems to me probable that this new operation will occupy about the following relative position in the operative procedures for fibroids 1, hysterectomy, 2, vaginal ligation of the broad ligament, 3, removal of the appendages

Yours very truly,

Chicago, Dec 13, 1893 Franklin H Martin

What Is Amblyopia Exanopsia?

To the Editor —Having devoted considerable attention to the study of cases presenting typical and indisputable illustrations of amblyopia exanopsia, I am disposed to respond to your query (in an editorial) in a recent issue of the Journal Is there an amblyopia exanopsia? and place myself on record as being decidedly of the opinion that many cases of obtunded vision are properly ascribable to non-use of the eye in question, and can not justly be attributed to other causes In order to induce us to accept such a condition, it seems that it is only requisite for us to revert to the fact that the process of seeing is virtually an educational one at the outset, and that while all of the requisite anatomic arrangements may be present in any given case, which are known to be essential for the visual performance, such as transparent optical media, physiologic accommodation, normal refraction, normal retinæ, together with normal optic nerves, and finally, physiologic visual cortices, yet unless the eye is stimulated to the proper extent at the beginning of the individual's career, the condition known as amblyopia exanopsia can and does ensue in a certain percentage of cases It has been advanced as an explanation of this class of cases, that there is back of all other factors an inferior mental perceptivity, but this must be largely discountenanced by the undeniable fact that, after correction of any and all refractive and muscular errors, the individual's visual acuity rises to a marked extent if the corrective measures are instituted timely enough Thus, it has been almost my invariable experience to note that in those cases of amblyopia exanopsia occurring in youth in which the refractive and muscular errors have been overcome, the sight of the amblyopic eye soon rises to a perceptible extent, and ultimately vies with its fellow in visual acuity

The case referred to in your editorial comments, quoted by Dr W B Johnson, is but one out of many in which the amblyopic eye has assumed a marked visual improvement, when necessity compelled it so to do by the accidental loss of the good eye, and, as stated by you, is strongly suggestive of the probability of the occurrence of amblyopia as a sequence of disuse Many good authorities are wavering in the balance with respect to this question, but it seems to me that the preponderance of evidence is in favor of the occurrence of amblyopia consequent upon disuse It is, of course, not difficult to collaborate a series of cases in which enter complicating elements serving to obscure the diagnosis Time and again, after tenotomizing the contracted internus for convergent strabismus in youthful cases and applying proper optical correction to the hyperopia present, I have noticed an eye that was prior to such measures decidedly amblyopic, assume a degree of useful vision, which progressively advanced in power, and to my mind is strongly conclusive that the amblyopia followed disuse

Now, it must be fully understood that the retinæ once educated to the full appreciation of images formed by the dioptric system are not comparable to the primitive untrained retinæ, for it is conceded that when the retinæ have acquired their maximum development, images may be excluded for protracted periods without impairing their sensitive, impressionable nerve elements, as is palpably demonstrated by cases in which the removal of hyper-mature cataracts serve to restore fairly acute vision And again, microscopists, engravers and others, compelled in their work to exclude the object perceived with one eye, do not necessarily impair their vision by so doing So too, with cases of opaque corneæ in which an iridectomy restores vision Squint in cases of opaque corneæ is explicable on the ground that there is in all cases a tendency towards binocular fusion, and if there is an opacity in an isolated part of the cornea, there is a strong desire on the part of the individual to direct his eyes in such a manner that the clear part of the cornea will be brought into use, and thus enable him to bring the most sensitive part of his retina, the fovea centralis, into play, thus taxing the muscular mechanism to an extreme degree, which is ultimately followed by a yielding of the weaker muscle and rotation of the eye towards the preponderating muscle

One of the strongest arguments against the acceptation of a cortical defect lying at the bottom of amblyopia, is the fully accepted fact of semi-decussation of the optic nerves in the higher vertebrates, for in view of this anatomic provision it would be necessary that both cortices should be seriously impaired, which would cause either complete obscuration of vision of both eyes, or double hemiopia instead of an amblyopia of the one side, as is so frequently found; and it seems to me that a better and more plausible explanation of amblyopia, granting the retina is normally perceptive, would be defective conduction of the optic nerve fibers, and especially of that portion of the nerve styled the papillo macular bundle, which is formed of separate nerve filaments connecting the macula lutea with the brain Assuming that these cases of amblyopia reveal no marked pathologic changes ophthalmoscopically, our knowledge of the distribution of the optic nerve fibers enables us to determine with a certain positiveness the site of the lesion in the optic tract, providing the same is due to a break in the conduction Thus in every case in which the defect is in one eye, or in asymmetrically placed defects of both eyes, the lesion lies in the optic nerve anteriorly to the chiasm, inasmuch as all breaks in the conduction posteriorly to the chiasm result in symmetrical visual defects, and for the same reason complete blindness of one eye, the other being normal, must be referred to a disturbance in front of the chiasm

This and much more might be stated in support of the theory that amblyopia exanopsia should be classed in the same category with cases of hemiopia, either total or incomplete Very respectfully,

JAMES A LYDSTON, Ph D, M D

Chicago Dec 11, 1893

Abdominal Dropsy —Sixty-seven Tapping Operations on One Patient

MARION, OHIO, Dec 15, 1893

To the Editor —The following interesting case is worthy of report, I think

Mrs B, aged 80, from disturbed hepatic circulation has been afflicted with abdominal dropsy for the past eleven years During the summer and fall of 1882 the abdominal cavity became so distended with the fluid that the lady was unable to walk, nor could she lie down, but was compelled to get what rest she could in an easy rocking chair Drugs for carrying off fluids were tried with negative results She finally consented to be tapped, and the operation was performed Dec 23, 1882, for the first time Great relief followed, and the patient was able to be up and around, but the fluid re-accumulated and she was again tapped seven weeks from the first operation From that time until her death Dec 3, 1893, she was tapped on an average of six times a year, in all sixty-seven times The average amount of fluid obtained each time was six gallons, by measurement, making in all 402 gallons The operations were performed with an ordinary trocar and canula

Taking into consideration the age of the patient, and the number of years added to her life, the case presented is one of encouragement for the operation in abdominal dropsy Although the fluid re-accumulated, after being tapped the patient was able to do considerable housework, and at times had taken walks of one and two miles During the eleven years the lady was under my care, no attempt was made at systematic medication for her troubles, because of an irritable stomach that revolted at the use of medicine It is difficult to tell how long she would have held out, as she was never confined to the bed but for a few days at a time, and death was caused by an attack of la grippe lasting about one week

Postmortem examination revealed a liver enlarged to about twice its natural size, with shrunken and distorted vessels, and a small ovarian tumor attached by a pedicle to the left ovary F W THOMAS, M D

Smallpox in Pennsylvania

PHILADELPHIA, Dec 11, 1893

To the Editor —The Board of Health of the city of Reading, Berks County, reports that for the two weeks ending Dec 4, 1893, 36 new cases of smallpox occurred in that city, with 1 death, making a total of 678 cases to date, with 18 deaths

Thirty-six cases were discharged from hospital and homes, forty nine cases were treated at their own homes, fifty-five cases remain under treatment in hospital and homes, and thirteen houses remain marked as infected

One additional case of smallpox is reported from Mechanicsburg, Cumberland County One fatal case of smallpox is reported from Jeannette, Westmoreland County Origin, Homeopathic Hospital, Pittsburg Eight additional cases of smallpox are reported from Homeopathic Hospital, Pittsburg The first case at this Hospital was that of James Bennett, recently arrived from Washington County, Virginia One case of smallpox is reported in Philadelphia Origin, not known

The eight cases of supposed smallpox at Altoona, Blair County, were afterwards found to be chickenpox

Eight cases of beri-beri are isolated in the Quarantine Station Hospital, Chester County, and six convalescents from this disease have been discharged No deaths All these cases are Lascars Very truly yours

BENJAMIN LEE, M D , Secretary

MISCELLANY

The Minnesota Valley Medical Society held its thirteenth annual meeting December 7 at Mankato

Back Numbers Wanted —Will pay a fair price for copies of the JOURNAL of January 1 and 16, 1892 Address this office

Goes to Russia —Dr Wassail of Chicago, has been appointed court dentist at St Petersburg, and will go in February to his new post With him will go his young wife, who writes cleverly and is a musician

New Contagious Disease Hospitals —The papers of Oshkosh, Wis , and Indianapolis, Ind , inspired by their Boards of Health urge upon their respective cities the establishment of contagious disease hospitals

New Hospital —The Baptists of Boston, under the leadership of Rev Everett D Burr, and Dr Francis F Whittier have determined to establish a hospital under the auspices of that denomination

Changed its Name —The *Pacific Medical Record* has been rechristened the *Medical Sentinel*, by which name it will hereafter be known It will be as bright and aggressive as ever under its new name, and we trust that the *Sentinel* may always be found guarding the interests of legitimate medicine in the Northwest

While hunting on the battle-field of Chancellorsville, Virginia, Dr Silvus of Jersey City, recently captured a small snake with two perfectly formed heads, of equal size When stopping in Washington on his way home he took the snake to the Smithsonian Institute where it created much interest

Monument to the Physician-Explorer —Dr Schnitzer, better known as Emin Pasha, the Governor of Eastern Soudan, having been admitted by his surviving relatives to be dead and buried in Central Africa, is to be honored by a memorial in Neissen, Germany, his natal town In this town there now resides his only surviving sister and his little daughter, Frida All Germany will be invited to unite in contributing to this memorial

A Judicial Dogberry —Dr Gibbs of Omaha, was recently fined by a Judge for being absent from the court room when subpœnaed as a witness The Doctor pleaded in extenuation that he had been called to attend a patient who was very ill, and could not reach the court room at the time The Judge asserted that the Doctor should have notified the Court, as the case was on trial, and refusing to accept his excuse fined him $10 Dr Gibbs said that in the same circumstances he would do the same, whereupon the Judge made the fine $25 and refused to remit it

Sir William Jenner, the distinguished English physician, used to tell with great gusto a tale of a footman of Sir Andrew Clark, that other great English physician who has recently died Sir Andrew was well known for his kindness to his servants, who regarded their master as the greatest man in the world One day a gentleman in urgent need of Sir Andrew's services learned from Jeames that it was impossible to see the eminent physician except by appointment "But, it is most urgent," cried the caller, in dismay "Quite impossible, sir " 'Well, can you tell me, then, of some one else near at hand?" "Well, sir," replied Jeames, reflectively, "there is a very respectable practitioner named Jenner on the other side of the street I think I may recommend him "

Slates and Pencils a Means of the Spread of School Diseases —Dr Cyrus Edson, of the New York City Board of Health, is reported as pointing out the new fact that many cases of communicable disease are the result of a practice among school children of exchanging their slates and pencils, while at their studies The Board of Education will be requested to interdict the passing of slates and pencils from hand to hand The Inspectors of the Board have reported cases where, in their opinion, measles and scarlatina have been spread among the pupils of the public school by a too free interchange of articles from the sick to the well

Spider-web Styptic and Tetanus —It is a popular notion in France and elsewhere, that spider-webs are "good for hemorrhage from cuts in the scalp and other wounds " A French paper states that a young man was wounded on the head with a cudgel, whereby a copious loss of blood was caused The webs were used to check the blood-loss, symptoms of tetanus soon after appeared and a fatal issue followed An examination of the cobwebs revealed the presence of the bacillus of tetanus, and the theory was formed that an inoculation into the open wound had taken place of this germ This experience, if verified, tends to put another of the alleged "Nature's remedies" on the shelf A good clean antiseptic (made so artificially) dressing will have the preference every time in the treatment of scalp wounds and the like

New Dispensary Law Proposed —In South Carolina the administration substitute dispensary bill introduced in the Senate is a drastic iron bound measure Under it no drink containing a trace of alcohol is allowed to be sold, given away, held in possession, taken from a depot, etc , unless it has the stamp of the dispensary on it Violation of this is made punishable by thirty days' imprisonment or $100 fine, together with confiscation of the liquor

Railroads are prohibited from handling liquors and the latter are seizable by constables without warrant There may be dispensaries in every county, but a majority of ten freeholders in any township can prevent the establishment of a dispensary In places where liquor-selling is prohibited previous to July 1, 1893, one-fourth of the voters can call an election, which a majority vote shall decide

Dry counties must pay for constables to enforce the law

In such counties citizens may have liquor from dispensaries shipped to them Any person can make wine for his own use and can sell the same through dispensaries by paying a commission of 10 per cent The payment of a United States tax or any placard indicating that liquors are sold is evidence that the law is being violated Hotels, where tourists stop, are exempted from the "nuisance" provision and may be agents or dispensers on giving $3,000 bond All penalties are under trial justices' jurisdiction and warrants are issuable upon the oath of any person who swears upon information and belief

Distilleries must report quarterly to the State dispenser as to their product and its disposition Constables may search depots, etc, without warrants Any person who resists any constable or officer who attempts to seize liquor sold is made guilty of a misdemeanor Dispensaries are allowed to sell beer by the glass, but no loafing on the premises is allowed

An Uncontrolled Controller —The City Controller of Indianapolis has been raising so many objections to the bills of the City Hospital, that the authorities of that institution are growing weary

The Controller refuses to allow bills for medical books of reference, or for necessary repairs of the building

The Controller's office was recently stirred to its inmost depths on account of a bill for young shade trees, purchased by the Superintendent, to ornament the barren grounds, with a view of making them attractive, and of use to convalescents

The Controller's cheese-paring ability rose to its highest pitch, when he returned the bill to the Hospital with the following statement

"I find that the bill for trees is not an obligation incurred in an emergency, but a cold blooded reach for the city treasury"

If the doctors of Indianapolis have the "nerve" with which they are generally credited, they will make a "cold blooded reach" for the City Controller's official scalp at the very first opportunity

A Report on Tuberculosis —Recommendations to the Health Board made by Dr Biggs, the Chief Inspector of Pathology Bacteriology and Disinfection in the Health Department, who sent to the Health Board a long statement regarding the contagiousness of tuberculosis, accompanied by a number of recommendations His explanations regarding the nature of the disease were thus summarized

"First, tuberculosis is a contagious disease and is distinctly preventable

"Second, it is acquired by the direct transmission of the tubercle bacilli from the sick to the well, usually by means of the dried and pulverized sputum floating as dust in the air

"Third, it can be largely prevented by simple and easily applied measures of cleanliness and disinfection"

Dr Biggs, in the report, refers to tuberculosis as "the most common and fatal disease which prevails in New York," and makes the following statements "In 1892 more than six thousand deaths were reported to the New York City Health Department as due to tuberculosis While this condition of affairs and its great significance have long been recognized by the Board of Health, owing to various considerations well known to those familiar with tuberculosis, this disease has not up to this time come under the official sanitary surveillance of the department"

His recommendations are appended in part

"First, that there be systematically disseminated among the people by means of circulars, publications, etc, the knowledge that every tubercular person may be a source of actual danger to his associates and his own chances of recovery diminished if the discharges from the lungs are not immediately destroyed or rendered harmless

"Second, that all public institutions, such as asylums, homes, hospitals, dispensaries, etc, be required to transmit to the Board of Health the names and addresses of all persons suffering from pulmonary tuberculosis

"Third, that special inspectors be assigned to duty for the investigation of this disease

"Fourth, that the Board urge upon hospital authorities the importance of separation, so far as possible, in the hospitals of this city, of persons suffering from pulmonary tuberculosis from those affected with other diseases

"Fifth, that the Department of Charities and Correction of this city be requested to set apart one of the hospitals under its charge, to be known as 'The Consumptive Hospital,' to be used for the exclusive treatment of this disease.

"Sixth, that the Board undertake the bacteriologic examination of the sputum for diagnosis in every case of pulmonary disease of doubtful character in hospitals or private dwellings or tenement houses where the physician in attendance desires that this should be done

"Seventh, that all physicians practicing their profession in this city be requested to notify this Board of all cases of pulmonary tuberculosis coming under their professional care"—*New York Tribune*

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from December 9, 1893 *to* December 15, 1893

Major JOHN BROOKE, Surgeon U S A, is granted leave of absence until Feb 22 1894

First Lieut BENJAMIN L TEN EYCK Asst Surgeon, is assigned to station at Ft McIntosh, Texas for field duty in the Department of Texas

First Lieut ALLEN M SMITH Asst Surgeon, granted leave of absence for four months to take effect on or about Jan 4 1894

Major PETER J A CLEARY, Surgeon leave of absence granted on surgeon's certificate of disability is extended four months on surgeon's certificate of disability on condition that he report in person to the commanding officer Army and Navy General Hospital, Hot Springs, Ark, on or before Dec 11, 1893, for treatment therein

Major ALFRED C GIRARD Surgeon U S A, is granted leave of absence for four months, to take effect about Jan 6, 1894, with permission to go beyond sea

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending December 16 1893

Surgeon C A SIEGFRIED, detached from U S T S "Richmond," and granted four months' leave

Surgeon J A HAWKE, detached from Widow's Island Hospital and special duty Portsmouth N H, and to the U S T S 'Richmond'

Surgeon M H SIMONS ordered to Widow's Island Hospital and to special duty at Portsmouth, N H

Medical Director R C DEAN ordered as President Board of Medical Examiners, Washington, D C

Medical Director A A HOEHLING, detached from Board of Medical Examiners, *and wait orders*

Medical Director MICHAEL BRADLEY, relieved as President of Board of Medical Examiners, and ordered as member of the Board

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Dr John S Fryer of Kansas City son of Dr B E Fryer, U S A. has been appointed Third Assistant Surgeon at the Soldiers Home The appointments are made by the National Board of Managers, who act on the recommendation of the surgeon in charge and the Governor of the Home

LETTERS RECEIVED

(**A**) Ashmead A S, New York N Y, Allen Ulamer, Jersey City Heights, N J Aglar J F, St Louis Mo

(**B**) Bryne, J H Chicago, Ill, Beck Carl, New York, N Y Batten, J M, Pittsburg Pa Blodgett F J New York, N Y, Brainerd, I N, Alma, Mich Bryant, W Cullen Pittsburg Pa Brown, E M, New York, N Y Brucker C M Tell City, Ind Baxter, W E, Bangor, Me, Burnett, C H Philadelphia Pa

(**D**) Devilbiss, A, Toledo, Ohio

(**E**) Earle, Frank B Chicago Ill

(**G**) Gardner, F A Washington, D C

(**H**) Hill R J Minneapolis Minn Hoch, W R, Philadelphia, Pa, Harsha, W M Chicago, Ill

(**J**) Jensen P C, Manistee Mich, Johnson, L O, Bellevue, Mich, Judson A B New York, N Y

(**K**) Keiper Geo F Lafayette, Ind King, A F A, Washington, D C

(**L**) Lawless, Jas Chicago, Ill, Lyon, H J, Chicago, Ill Lautenbach, L J Philadelphia, Pa

(**M**) McIntire Charles, Easton, Pa Magruder, G L, Washington, D. C Marsin, J M Massey, Texas

(**P**) Pottberg Charles Philadelphia, Pa

(**R**) Renfro J C B, Houston Texas

(**S**) Seymour, F E, Ft Dodge Iowa Shields, W B, St Francis Ark; Stafford H E New York N Y

(**T**) Tyrell, G G, Jr, Sacramento, Cal

(**W**) Westmann, B & Co New York N Y Whisler, H C,, New Brighton, Pa Whitehouse, H H, New York N Y

The Journal of the
American Medical Association

Vol XXI CHICAGO, DECEMBER 30, 1893 No 27

ADDRESS

CHAIRMAN'S ADDRESS

Read in the Section on Dental and Oral Surgery at the Forty fourth Annual Meeting of the American Medical Association

A E BALDWIN, M D, D D S
CHICAGO, ILL

The Chairman of this Section is supposed each year to write a paper upon notable events of interest occurring in the bounds of our specialty during the past year

While in a general way there has been a move forward during the year, there has been little in the progress that can be specially mentioned, and the writer must satisfy you as far as possible by bringing before you, to elaborate by discussion, a few thoughts and opinions only

We can not help having noticed that since the last meeting of our ASSOCIATION at Detroit last year, the subject of the so-called "Code of Ethics" has been very largely discussed in our ASSOCIATION JOURNAL This Code is a matter that does not interest us as specialists as much perhaps as it does the general practitioner But the writer can not let this opportunity pass without suggesting that, in his opinion, the nearer we get to the ideal professional man, in the broad meaning of the term, the less we will *need* a code to govern our actions

So the only real use of a code is for those who are not disposed to do just the right thing, and for those so disposed it can be said that no code can possibly be framed that he can not render inert in spirit while observing the letter, and in the opinion of the writer in the vast majority of cases, those who are the most strenuous about the strict observation of the letter of the Code, are usually the ones who apparently, persistently and intentionally violate the spirit of it

It seems to me that the query must arise in all fair minded people, Is not the spirit of the Code, *the code*, rather than the mere letter thereof

We think in this matter of recognition that homeopathy and other "pathies" owe more of their standing to-day to the persecution and persistent attacks of our brethren, than to any other one thing There is nothing that will give the professional person in any profession, position and employment quicker with the laity, than the persistent and bitter personal attacks of those who should be brethren And we also think if matters were properly understood, there would be found less of difference between the practices of the so called schools, than we imagine

As intelligent practitioners we should realize that the interests of those placed under our professional care, imperatively demand that we look primarily and only to the possibilities of good to *them*, with very little, if any, special consideration as to "pathy" or creed, previous or present belief of the consultant, for a reputation that has to be builded upon the ruins of another's, would be far better unbuilded

The demand for a more thorough education in all departments of medicine, stimulates us to action to keep abreast of the times, and we must exercise great wisdom and judgment to always know what new ideas are worthy of fostering and adoption, and what are unworthy of our serious attention A great danger at present in all walks of life, is to fadism, and with us there is danger that in our enthusiastic adoption of some new theory, we do *not* make use of, or realize, the sterling worth of the old, approved and established ideas We are reminded of this in the now all absorbing fad of laying the guilt of every ill to microorganisms, and perhaps in using agents destructive of these, when instead we should use the greatest of all healing and healthful agents, alone, and that is cleanliness

We are further reminded of this in our specialty, when we say there is great danger that in formulating and exemplifying theories of the causes of decay, and germ destroying methods, we may forget that *whatever* the cause of decay when it is present in the tooth, it should be removed, so that at least in the external walls there be nothing left save that which is healthy, and then by proper adaptation, our work will be as secure from failure as is possible We do not mean that broad and thorough work and research should be discouraged, but instead, heartily recommended, but what should be discouraged and condemned is the so-called research, which is rather intended to fortify or prove some preconceived idea The greatest danger in our special field is to narrowness and the lack of patient and earnest search after wisdom in the broader fields The broader we become as students, the less need will there be of any hampering or stiff boundary lines of rules of ethics, and the more surely the golden rule of "doing as we would be done by" will prevail, and that spontaneously When we realize how broad the world of wisdom is, we will cease to even imagine great learning in ourselves We think the attention of the general practitioner should with great emphasis be directed to the necessity of preserving the temporary teeth, especially the temporary molars, for they are not usually replaced by the permanent until the tenth to the twelfth year The importance of this will be realized, when attention is called to the fact that the child needs well masticated nutriment much more than does the adult, for their system needs not only material to supply the waste, but also for the rapid growth and development of the whole physical organization *Again*, if these teeth are neglected, they soon become sensitive, and then the child will not properly masticate the food, but forms the habit of bolting his food, thus introducing the whole train of dyspeptic troubles *Again* children's teeth, whether sound or decayed, should only be extracted when the new or permanent tooth to take its place is ready to come in, then only the *one tooth* should be extracted, for in the writer's opinion, one of the most fruitful causes for irregularity in the permanent teeth, is the extraction of more than the one temporary tooth to allow the larger permanent tooth room to come in, forgetting that while coming in apparently with much irregularity oftentimes, they will as a rule regulate themselves by expanding the jaw, before the age of twelve or fourteen years, and this expansion of the jaw is a necessity to the physiologic development of the normal face And that, recognizing the fact of the natural tendency of the teeth to move forward, or toward the mesial line, the natural sequence of the extraction of a temporary tooth, before the time for the eruption of the corresponding permanent tooth, will be the partial or complete closure of the space, so the permanent tooth when it comes in will have such a restricted space that an irregularity must result

Another thing is the failure of the general practitioner in not recognizing that, in the great majority of cases, an abscessed tooth may, by proper treatment, be made so that it will give satisfactory service for many years, being almost universally amenable to treatment and filling So that the field for the judicious extraction of the teeth has been narrowed to a very meager number And in this connection, the writer expresses the opinion that the persistent, often repeated and long continued treatment of these pulpless teeth is most often needless, and entailing unnecessary expense and trouble to the patient, and that the end may be attained usually in one sitting, *provided*, that the roots can be and are cleaned out and made perfectly dry, and a non-irritable and complete filling placed therein And if any irritation follows, this can be better treated from without than through the small and often tortuous root canals In fact, it is extremely rare that with careful and thorough work, the pericemental irritation, if present at all, will be more than so very slight as to be scarcely noticed

This year is made prominent in our specialty by not only the regular Association meetings, but in addition the Pan-American Congress in Washington, in September, with a Dental Section which, from all we can learn, promises to be a valuable meeting, and, in addition, the meeting of the Columbian Dental Congress, which convenes in Chicago in August, which in its conception was to be a broad, cosmopolitan meeting, but under the management seems, by what we can learn and by the official list of officers elect and appointive, to have come down to the cheapest political methods of distributing the official honors among the committee of fifteen and their immediate friends All it needs is a careful examination of the published list of officers to see that the *principal* officers have been named from their own number, and in some cases distributing to themselves several of the most prominent positions The writer believes that there are men in this country who would have been a credit to the positions so distributed, had they been named, and to have made the appointments outside of their own number would have freed them from the suspicion of intriguing themselves into the most prominent places It makes one humiliated to see men of eminence, when appointed to positions of prominence, arrogate to themselves positions as they have done, for it is an excellent unwritten law that positions should seek the man, and not the man the position In the writer's opinion, the action of the committee in the whole management so far, has been such as to work great injury to our professional standing, and will work more harm to the so called Congress than they realize, even though in point of numbers the meeting is a success This is not written to be personal, for we are sure some of the committee were not actuated by such a spirit, but all committees are blamed for the action of the majority Such things are of great harm to the general good feeling and esprit de corps of the profession at large

In closing these brief remarks, I can not forbear to notice the absence of one who has very seldom, if ever, been absent from our meetings since this Section was organized, and in fact who was very instrumental, with Dr Talbot and others, in forming it, one of the greatest minds, if not the greatest, in our specialty We note his absence with sorrow I refer to our friend, Dr Walter Webb Allport, who March 21, 1893, passed from earth His memory will long survive as an inspiration to the younger members of the profession, and in the annals of our work, even in the future, few names will shine with the luster of his — always standing for that which was ennobling, elevating and broadening, that which he conceived was for the best interests of the work he loved and served so well

I would suggest that this Section take such action in his memory as they may deem wise

Thanking you for your kindness, I leave the proceedings of this Section in your hands

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ORIGINAL ARTICLES

DISEASES OF THE MAXILLARY BONES AND THEIR PERIOSTEUM

Read in the Section on Dental and Oral Surgery at the Forty fourth Annual Meeting of the American Medical Association

BY VIDA A LATHAM, F R M S, D D S
CHICAGO ILL
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Under this heading we will notice some points of interest connected with dental surgery and pathology, although the cause and history of these diseases are so numerous that it will be almost impossible to do more than briefly allude to some of the most common forms met with by dental surgeons, every one of whom ought to have such a knowledge of the affections of the oral cavity that they might, with some degree of certainty, determine what the causes are, their pathology, diagnosis, and their treatment Especially should we know the morbid growths which can occur, whether benign or malignant, so that we may early diagnose the case, and if we do not care to take such cases for treatment, to warn our patient to consult a surgeon

Unhappily, the question as to whether dentistry is a specialty of medicine still exists Even such a man as Prof Norman W Kingsley says in the *Medical Record*, Nov 20, 1886 "Oral surgery, even in its most comprehensive sense, is not dentistry, any more than dentistry in its most comprehensive sense is not oral surgery" But whether it is or not, every one is well aware that one department can not do without the other, and the more we can learn of all the sciences the better professional men and women shall we become The position of dentistry as a specialty of general surgery is justified to a greater degree than in the case of any other specialty "Surgery," as defined by one of our surgeons, "is that branch of the healing art which takes charge of all those diseases and injuries which require in their treatment the use of instruments and mechanical appliances, operations or especial manual dexterity " To no other specialty does this definition so aptly apply as to our own, and with reference to general surgery as a specialty of medical science, we know that a specialty should be the outgrowth of a liberal professional education—in short, that a specialist should be a man who "knows something of everything and everything of something "

The standard of a profession is raised or lowered by the character and work of its representatives It rests entirely with them whether they will assert and maintain their claims to their true position, or allow the public to estimate them as it pleases Better times, however, are coming, better men coming to the front, better thinkers and workers are banding themselves together, resolved to show that dentistry is not beneath, even if it is not above, the medical profession, but that it is a large and distinct branch of medical science, requiring not only the same studies but its own special ones as well, and must be recognized and honored as such

Medical men know too little dentistry, and the dentist too little of general medicine, to be able to examine thoroughly these diseases of the jaws and to treat them as is necessary, seeing that they depend for cure on the attention given by both professions We, of all people, should know thoroughly the healthy normal appearance of the oral activity, all it contains, and should therefore be immediately able to detect any pathologic condition Cultivate thoroughness as early as possible, make a methodical examination, beginning at one tooth, say the left superior third molar, and continue around the arch, and then do the same with the inferior maxilla Note the condition of the mucous membrane, which shows much of the condition of the roots of the teeth, the tongue, which indicates the state of the alimentary canal, the secretions of the mouth, which aid us in telling the nature of the calcific deposits upon the teeth, and whether the sensitiveness is due to acidity, and then note the color of the lips, and finally the general condition of the patients themselves If any abnormality be present, examine for the cause with every care, then decide on the treatment and remedy, noting at the same time the idiosyncrasy of the patient Many of these affections we, as dentists, are called upon to treat, and others, after they are diagnosed, we should hand over to the care of the physician With these cases, whether simple or serious, we should be well acquainted, as we are more likely to see them in their early stages, and by immediate interference we may warn our patient and thus induce him to obtain medical or surgical attention, and thereby save him from long and serious, yes, and often fatal illness

We are all aware of the difficulty in diagnosing oral tumors For example, in epithelioma it is far better to urge early surgical interference than to wait until extension by the lymphatics places the patient beyond help Hence make an early diagnosis, examine every sore, ulcer and spot in the mouth, using every precaution in antisepsis for the benefit of the patient and yourself

For the reason that the diseases of the jaws are not often discussed, I have ventured to write a few notes on them, to try to show that they bear the same relation to dentistry as do the diseases of the gums It is a matter of some difficulty to decide how to classify the subject Perhaps the easiest way will be to discuss first the periosteum and its diseases, and then the close relation it bears to the bone itself will explain how the latter becomes affected

The alveolo-dental membrane intervenes between the tooth and the bony socket or alveolus It was formerly supposed to consist of two layers, but the idea has been abandoned since it has been demonstrated that fibers could be traced continuously from the bone to the cementum The membrane, periosteum or ligament, as it is variously called, consists of connective tissue, between the bundles of which run groups of vessels and nerves, but it contains only a few yellow elastic fibers, and therefore can not be stretched much It is, however, necessary that the tooth should be capable of some degree of movement in its alveolus, for every temporary inflammation by increasing, for the time being, the blood supply of the part, causes the partial extrusion of the tooth which is so well known to patients as being "longer than the rest " How, then, if we have so few elastic fibers, is movement of the tooth, without tearing the unyielding membrane, rendered possible unless it be by a special disposition of the fibers? The bony attachment of each band of fibers is nearer the neck than the cemental portion of the tooth, and may be looked upon as suspending the tooth in the alveolus by fasciculi of the periosteum, rather than as resting upon the membrane, and therefore some play is allowed, as the tooth can be raised or lowered until the cemental fibers are visible or lost to view beneath the gum The fibers are continuous, but there is a slight difference between the portion nearest the bone and that nearest the cementum. At the former place the fibers are larger, while at the latter they become a fine net-work and more cellular. Again, age affects the tissue, for specimens show it to be thinner, especially the cemental portion, but it is not entirely obliterated The periosteal blood supply is very complex, being derived from the pulp-artery[1] branching off just before it enters the foramen, and the terminal filaments anastomosing with the arteries that supply the gums Just at the rim of the alveolus there is a rich plexus formed by union with the arteries of the periosteum and gums, the "gingival plexus," and near the cement there is a capillary plexus "The blood vessels are most numerous, midway between the bone and cementum, or rather nearer the latter " (Tomes) Thus we may conclude that the teeth have three sources of nourishment, viz through the pulp, and through the peridental membrane in its two sources

The exact nature of the membrane is still far from satisfactorily explained Malassez (*Journal British Dental Association*, 1885, p 484) says it is a ligament for these reasons *a*, if true periosteum existed in such a situation, mastication would be a very painful process, owing to the abundance of nerves, *b*, microscopically the tissue is more ligamentous than periosteal in structure, *c*, mastication produces traction, not pressure, *d*, the attachment to the bone and cementum is precisely like a tendinous insertion, *e*, the distribution of the vessels and nerves in the interstices between bundles of fibers suggests ligament and not periosteum Ranvier and Kolliker take a similar stand regarding its structure And yet we know it is true that the membrane is directly continuous with the periosteum covering the rest of the maxilla, that the shock of mastication can be borne on periosteum, as, for instance, in edentulous ridges of the jaw-bone, and again it is certainly not quite a typical ligament, but a typical periosteum, with a specially modified function

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[1] "The Blood Supply of Teeth " Dr Hunt in Dental Review

The alveolar walls develop at the same time as the root Proceeding from the base of the follicle is a line of cells, the formative point of cementum, and another line, the formative organ of the alveolar walls, one develops down to form the socket, the other forms the cementum, the two layers being continuous Whether the membrane is single or double is a question Analogy from anatomy, etc, would make us think the true membrane would be in two layers Demonstration proves it, for on extraction, the root of a tooth is covered by a membrane and the alveolus is lined with a membrane The alveolar lining is from the bone, and so it must be referred to the osseous system The formative organ of the cement, can it be the same as that which forms the alveolar walls? Some say it can not, and yet the cementum is like true bone except for the perfection of the Haversian canal, and the lacunæ are irregular in shape, size and distribution The canaliculi are more numerous from the periosteal side of the lacunæ, fewer run inward toward the dentinal surface, and they contain the remains of the formative ‘ osteoblasts ” as we find in bone The cementum contains “ fibers of Sharpey,” developed from the formative periosteum, which are calcified bundles of fibrous tissue like those in bone, and therefore why can we not call the cementum a modified bone? Tomes says the cemental organ and that which forms the alveolar walls are not the same, they are closely united but distinct and separable, the external formed from connective tissue with blood vessels, the inner a layer of cells Dr Ingersoll says he saw some of Dr Black's specimens, and one of them was perfect in showing the histologic difference of the two layers None of the straight lines of the peridental membrane were found in the alveolar membrane If the membrane is double, two sources of vascular and mineral supply would be expected, from the pulp and from the sub-mucous tissues Pathology aids us by revealing the difference in exostosis and hypercementosis Irritation follows the blood vessels, and under the influence of irritants the root may take on an abnormal action, this is one form of exostosis, which latter term should be properly named either ex or hypercementosis If the nerves and blood-vessels follow the course of the membrane and it is not double, why are not both layers affected? Why do we not have both true exostosis or enlargement of the socket and also hypercementosis or enlargement of the roots, consequently tooth-ankylosis? When two roots are exostosed they grow together by impingement, but never the alveolus and root, hence there is no osseous union Yet again, how often do we find periodontitis go on to periostitis, one being usually primary to the other? Would this not imply they were connected, if inflammation can so readily pass on from one to another? The conclusions I have arrived at by reading and specimens are

1 The periosteum and the peridental membrane are identical I prefer the term, periosteum

2 It is divided into two layers, internal and external or osteo genetic and fibrous, the internal, or osteo-genetic, forms the alveolar layer and the external, or fibrous, forms the cemental layer

3 The alveolar and cemental membranes are not identical

4 The two layers have different functions, one forming and lining the alveolus, the other surrounding, and holding the root

5 The cement appears to be developed from the periosteum, and not from the dentine or odontoblast cells, as under the microscope it has the same appearance as bone, except that the lacunæ and canaliculi are not so perfectly developed

When cementum is required to be very thick, as in herbivorous animals, where it is destined to cover the whole tooth, Magitot says, it first becomes the seat of a formation of hyaline cartilage, which ossifies like any other bone developed after the intracartilaginous method Where it is to be thin and only cover the crown, as Nasmyth's membrane, it is the seat of ordinary intra-membranous ossification

6 Pathology shows the same fact, there is no union between the root and the alveolus

7 The rapid mineral absorption of the root without exfoliation, is due to the special nature of the cemental membrane as distinct from the membrane of the socket, and has been microscopically proved

8 It is a great deal better to consider the peridental membrane as periosteum divided into two layers

Periosteum	External (fibrous) layer, continued as the cemental layer	peridental membrane
	Internal (osteo genetic) layer continued as the alveolar layer	

The structure white, fibrous tissue, cells, blood vessels, nerves, little elastic tissue and no fat Thicker at the neck than at the root Fibers of periosteum run downward and inward to the root, so the more pressure on the tooth the more tense the fibers Structurally, there is one common periosteum for tooth and alveolus, the fibers at the cemental surface being looser than near the bone The fibers attached to the bone are arranged into bundles, thus some parts are seen to be denser than others In the reticular or cemental fibers, cells or osteoblasts are seen, and also at the bone surface Corpuscles are also dotted all throughout the periosteum The fibers of the periosteum at the neck blend with the fibrous tissue of the gum, and with the periosteum of the alveolar border Pulpitis leads to periodontitis or periostitis by free communication from vessels of the gum

Diseases of the Alveolar Dental Periosteum —The principal one is inflammation (periodontitis), and its causes number at least seventeen, viz want of occlusion, malocclusion, tartar, looseness of teeth, induration of tooth-tissue, cavities of decay impinging on cementum, excess of filling material, pulpitis, extraction of pulp without hemorrhage, external irritation by forcible removal of pulp, enlarged foramen, putrescent pulp, previous periodontitis, action of medicines locally, contact with arsenic, morphin, action of medicines systemically, action of syphilis, fever, diphtheria, gout, rheumatism Inflammation here is no different, pathologically, from any other, but it has special symptoms because of its position Rheumatic periostitis is acutely painful, does not lead to suppuration, and varies with the weather In mercurial periodontitis the breath is very foul, and if mercury is continued the whole surface sloughs away, together with much of the alveoli Strumous periodontitis tends to rapid suppuration, swelling and abscess, and is less painful Periodontitis due to phosphorus fumes is apt to end in necrosis of the entire jaw bone

The varieties of periodontitis are

1 Acute, sub-acute and chronic
2 Traumatic
3 Absorption of roots in diseased condition of the membrane and after injuries, transplantations, replantations, etc When the membrane is healthy, no absorption of roots of permanent teeth takes place
4 Apical Confined to the end of the root, following death of pulp
5 Gingivitis Inflammation of peridental membrane at border from constitutional causes, as ptyalism
6 Calcic inflammation
7 Phagedenic A specific infectious inflammation having its beginning in the gingival border, and accompanied by destruction of the periodontium and alveolar walls Rigg's disease Periodontitis may be local or general, the majority of cases being the latter

Repair of the peridental membrane is said never to take place by first intention, but always by granulation, which may begin in the tissue overlying the parts of the root, but the re-attachment creeps in from the injury where the peridental membrane is intact or from the extremity of the pocket above, and slowly covers over the denuded portions of a tooth Sponge-grafting has been suggested to renew the gingival and lower border of the peridental membrane when lost from phagedenic periodontitis

Periostitis, both acute and chronic, affects the jaws The acute form is a dangerous one, as it so often runs into suppuration with consequent necrosis It is only in the early stage that it can be recognized The more chronic form is commonly connected with syphilis, and leads to the formation of nodes about the palate and enlargement of portions of the inferior maxilla, and it may be well to mention that many cases of persistent facial neuralgia, which are unrelieved by quinin, etc , yield to potassium iodid, and may be said to depend upon chronic periostitis or osteitis with, probably, pressure on the dental nerves

Necrosis This disease affects the inferior much more commonly than the superior maxilla, probably in consequence of its being less vascular (Heath) Beginning as periostitis from dental irritation, injury, action of specific poisons, the symptoms generally are, pain with pyrexia, part swollen, ingested, teeth raised and unable to bear any pressure If immediately relieved by leeches, free incision, hot poultices, etc , the symptoms may subside and no further injury result, but usually pus will be found beneath the periosteum before the patient comes to you, and even then, though evacuated instantly, necrosis is usually the result Luckily, necrosis sometimes only affects the external plate of the alveolus, so you get the teeth supported by the internal plate and you can keep them in situ, but when the entire alveolus is involved, the teeth loosened and possibly useless, they had better be removed, as they only stop up the discharge Do not attempt to remove sequestra unless you are sure they are completely loosened, or you may inflict injury on the surrounding parts and interfere with the process of repair, and this is especially the case with children in whom the second teeth are still undeveloped The time of separation is difficult to decide on, for we must depend on the strength of the patient, and the extent and position of sequestrum It takes usually about six weeks to three months before large sequestra can be safely removed

Another form of necrosis is the exanthematous, so named by Salter This name is applied to the diseases found in young children, usually after attacks of specific fevers, especially scarlet fever and smallpox Necrosis of portions of the alveolus of either maxilla which usually occurs on both sides alike or even when it involves the whole thickness of the lower jaw, is now taken as one of the sequelæ of these diseases , and possibly many cases in years gone by, thought to be due to calomel were solely due to the action of the specific poison The repair of bone in necrosis of the upper jaw is a little different from that of the lower No reproduction of bone takes place, the gap left in adults being permanent, though in children, the subjects of exanthematous necrosis, the granulation tissue is slowly converted into fibrous tissue, which does not as a rule ossify In the inferior maxilla, abundant new bone is formed by the periosteum, and for a time, at least, most extensive losses are repaired It is certain, however, that in the course of years, a great, if not a complete re-absorption of new bone thus formed takes place, the patient being left finally with very little if any, support for artificial teeth Prof Salter has suggested that the early application of artificial teeth would tend, by use, to strengthen and maintain the permanence of the new bone , but I believe there are no facts to support this view

The action of the fumes of phosphorus is well known to cause necrosis, but is less common now than formerly, on account of the substitution of red amorphous phosphorus for the yellow variety It only occurs when the teeth are carious and the jaws in an unhealthy state Those with carious teeth who work with phosphorus are always affected, and the necrosis is violent and rapid The disease may begin as osteo-periostitis which rapidly ends in necrosis, or it may begin by osteo-plastic inflammation, swelling, profuse and offensive suppuration of the soft parts, attended with pyrexia These symptoms are sometimes followed by gangrene, erysipelas and death Sometimes the removal of the sequestrum is followed by recovery The whole jaw is usually involved, the callus lying between the sequestra The notable point to be observed in phosphorus necrosis is the peculiar deposit of pumice-like bone, which takes place upon the sequestra This no doubt comes from the periosteum, although so closely adjoining the sequestrum as to be almost always brought away with it, and though resembling true bone in some particulars it is a little lower developed form of bone. A deposit closely allied to this, however, has been noticed in cases in which there was no phosphorus involved, and it would appear that, in some instances, possibly of rheumatic origin, the deposit of new bone partakes of this character

The action of mercury can be briefly mentioned here it injures the teeth in two ways by salivation and by the graver injury, the production of honeycombed teeth, which is often confused with the effects of inherited syphilis Honeycombed teeth are the result of mercurial treatment during the period when the enamel is being calcified (J Hutchinson, *Path Soc Trans*, Vol XXVI, 1875, pp 235 et seq) The two affections have been discussed by Mr Hutchinson together, and because they are coincident with ophthalmic changes and the question of mercury occurs in both, much confusion has arisen Below is briefly contrasted and tabulated these conditions

	HONEYCOMBED	SYPHILITIC
1	Are peculiar only in the latest formed tissue, the last layer of enamel	Are most peculiar in the earliest formed tissue, the last formed enamel being usually perfect
2	Perfect at birth, become affected after a year or so	Are imperfect from earliest germ stage
3	Are coincident with lamellar cataract, infantile fits and mercurial treatment	Are coincident with interstitial keratitis inherited syphilis, and have nothing to do with mercurial treatment
4	The teeth that suffer most are the first permanent molars	The teeth that suffer most are upper incisors
5	The general form of the teeth is unaltered	The form of the teeth is profoundly modified

Mercury, as a rule, on the deciduous teeth is a lasting injury, but on the periosteum in adult life it is transient unless long continued In mild cases, in addition to periostitis, there is a profuse flow of saliva, a mercurial fetor of the breath, with later on swelling and sloughing of the alveolus and gums, upon which in severe cases a whitish membrane appears, this is at first lightly attached, but later is adherent, and it is *underneath this* that ulceration of the gums takes place The teeth soon loosen and are lost, and in very bad and neglected cases the whole surface sloughs away, together with much of the alveoli, and necrosis of the whole jaw may result and we have mercurial stomatitis

Periostitis due to rheumatism will very likely pass away, especially if much affected by the weather, but it is often difficult to persuade a patient to retain a dead tooth which keeps up this periodical irritation [illegible]r these cases, what treatment can be given other [illegible] systemic remedies, counter-irritation, warmth, [illegible]patience?

[illegible]eriostitis due to syphilis or struma is not so eas[illegible]y disposed of, for it usually progresses to the worst degree Salivary calculus, if removed in time, will scarcely ever cause dangerous periostitis, but the serumal is a great deal more likely to set up and prolong irritation to such a degree as to cause exostosis and its concomitants, and as we can seldom remove it unless by extracting the tooth and scraping the deposit from the ends of the roots and replanting, the prognosis is not at all favorable When due to the last stages of pulpitis, misapplication of arsenic, the chances of recovery for the tooth are smaller

Before noting the diseases of the maxillæ, it will be well to allude briefly to a disease of the alveoli, pyorrhea alveolaris or Riggs' disease We are all very well aware of how little is known on this subject, and of the theories advanced Why should we classify this as a special disease all by itself, instead of following a more logical course and regarding it as a pure periosteal one, for its pathology can be best understood if it is regarded as a form of osteo periostitis, even though it is confined to the alveolus—in fact a final stage of per[illegible] s th[illegible] ffect upon the teeth is entirely secon[illegible] ent upon their separation from th[illegible] symptoms and characters, bot[illegible] microscopically, the course it follows and its amenability to various forms of treatment, it presents no special phenomena to distinguish it from simple caries of bone, save that the latter disease is almost always associated with an impaired condition of the general health In this respect, and in the absence of fever, pyorrhea alveolaris more closely resembles Sir James Paget's osteitis deformans, concerning which I quote the following "The surrounding gum becomes spongy, deep red, and sometimes tender it separates from the neck of the tooth, while at the same time the periosteum suppurates and discharges pus, which is continually oozing out around the necks of the teeth and can be generally pressed out in great quantities It is extremely chronic, begins generally in early middle age, and may continue for an indefinite time without influencing the general health The early stages of the disease are sometimes attended with pain varying widely in severity The breath is usually foul, the roots covered with irregular granular masses of greenish or blackish tartar, the discharge offensive and the whole mouth tender " The causes are not easy to find in all cases, but they are similar to those which cause periostitis Injury of any sort to the periosteum, as cold, a blow, or excessive bite, a strumous or syphilitic diathesis seems often to coexist

The treatment should be based on surgical and medical principles, allowing for location, exactly like caries of bone, where the use of steel instruments is usually contra-indicated on account of the further injury which is likely to ensue Unfortunately, our knowledge has been handicapped thus far by regarding this disease as a purely dental one, confined to dental tissues, instead of a surgical bone disease The more the disease was regarded as dental, the more did we forget that the alveolus was only ordinary bone, subject to the same changes as any other bone, and having just as unsatisfactory treatment as caries has wherever it occurs

NECROSIS CONTRASTED WITH CARIES

NECROSIS	CARIES
1 *Parts affected*—In compact tissue Blood vessels are better supported in compact bone and so less liable to passive congestion but *from the narrowness of* the canals they are quickly strangulated by the pressure of the exudation and so the bone is rapidly and completely deprived of vitality	1 Most common in cancellous tissue Here is room for dilatation and exudation without their causing a sudden stasis in the vessels
2 *Result of Probing*—A probe is suddenly arrested by striking against hard bone, without giving rise to pain	2 It is felt to pass through soft inflamed bone and this is quite sensitive
3 *Nature of the Discharge*—Is mostly purulent	3 More watery or serous and has a greater amount of lactic acid
4 *Granulations along the sinus and at its orifice*—Are comparatively healthy, often fungous and florid	4 Small or large, pale and edematous
5 *Cause*—The more acute, local injury or constitutional as acute specific fever, the more likely is inflammation to end in necrosis	5 In scrofula, caries is most common
6 *In syphilis*—Both are frequent	

Under the head of hyperostosis we will group cases in which general enlargement of the maxillary bones occurs, without any tumor which could be properly placed among the osteomata Enlargements of the angles of the inferior maxilla quite apart from the development of the teeth, and giving a peculiarly broad appearance to the face, occur in otherwise healthy subjects of about twenty, and they appear to be stationary In true hyperostosis, however, there are always large nodules of bone, often symmetrical, thrown out by the bones of the face and cranium, which slowly but steadily increase in size, producing hideous deformity and finally causing death Heath has operated on some cases where the disease was unilateral, with good success

Cysts occur in both jaws, either single or multiple Their origin is probably in the cancelli of the bone, and is in many cases due to irritation caused by neighboring teeth, a cancellous being filled with fluids expands, and produces a gradual absorption and obliteration of neighboring cancelli until a cyst of considerable size is formed

The multilocular cysts of the inferior maxilla appear to be more closely connected with the teeth than the single cysts, since in many cases the extraction of teeth or stumps gives exit to a quantity of glairy discharge Distension and absorption of the alveoli go on as the cysts increase in size, so that the walls at length become membranous and the macerated bone shows great gaps in outline A remarkable point is the length of time over which they may extend without injuring the patient except by inconvenience

Tumors, Neoplasms, Non-Malignant —Fibromata of the jaws resemble fibromata of other parts, but they have two origins the periosteal, springing generally from the alveolus, and indistinguishable except by its size from epulis, and the endosteal, which springs from the interior of the bone and in the upper jaw, generally makes its way into the antrum and nasal cavities, or in the lower jaw expands the inner and outer plates of compact bone Fibromata seem to owe their origin, in many cases, to the irritation of decayed teeth, which may sometimes be found embedded in the growth or displaced by it The growths produce absorption by pressure and may in this way destroy a great deal of structure

Epulides are of two kinds, fibrous and sarcomatous The fibrous epulis starts from the periosteum of the jaw, and is covered by the epithelium of the gum The growth consists of long fasciculi of white fibrous tissue, which have a radiating arrangement, in many cases, from the point of growth, the most noticeable feature is the length and slenderness of the fibrous fasciculi and their loose felted arrangement Epulides depend for their hardness on the amount of fibrous tissue they contain

Angiomata may also occur, and I know of one case growing from the posterior wall of the antrum, which was diagnosed as osteo-sarcoma by a most competent physician and surgeon The true nature of the growth is shown here by two micro-photographs, taken from the specimen before it was hardened, and it will easily classify itself into a fibro-angioma showing two distinct kinds of structure, the fibrous and the angiomatous, thus accounting for the excessive hemorrhage which occurred during the operation It is well to remember that we may have both simple, cavernous, lymphangioma and angiosarcoma

Enchondromata are less frequent in occurrence in the jaws than fibromata, and like them may for convenience be divided into periosteal and endosteal The disease usually appears early in life, springing from the surface of either jaw or from the antrum or the interior of the lower jaw, and has a more steady and rapid growth than fibromata In the case of the superior maxilla the growth is more tuberous, and is apt to send off processes into the fissures and cavities of the skull, giving rise to great deformity Enchondromata as regards their micro-structure vary greatly, and we must prepare for many enigmas in studying them Whenever chondroma is associated with sarcoma it seems to take an erratic course, when, however, a pure chondroma is found, it is always more near the normal type of cartilage All the chondromata are very liable to calcification, and they sometimes undergo a softening process and small cysts form in them

Osteomata are a further step in the development described under chondromata They are formed from newly developed connective tissue, and it is a fact which distinguishes them from so-called ossified inflammatory products After decalcification under the microscope they resemble true bone, and like it, can be divided into hard and cancellous Many, however, vary a good deal from the normal type, especially the hard variety, which is sometimes extremely dense

Osteomata have been described as primary growths, but are extremely rare True bone is sometimes found in cartilaginous and fibrous tumors, and also in sarcoma, as the myeloid variety The cancellous osteoma is the simplest form, and due usually to a misplaced tooth, and the fact that numerous serious operations have been performed in these cases, should make every one extremely careful in their diagnosis The growth is slow and reaches a large size, but when removed by section of the healthy bone it shows no tendency to recur

Under the term, cystic sarcoma, many varieties of growths were classed and by some authors termed a variety of epithelioma (see Mr Eve, in Erasmus Wilson Lectures for 1882), but they differ so completely from the ordinary form, as to rapidity and recurrence after removal, that as yet further observations must be made before any decision can be arrived at

The largest and most dangerous class of growths met with are the *sarcomata*, divided into three classes by the shape of their cells *a*, round, *b*, spindle, *c*, myeloid And these have again a number of modifications and varieties As the general features are so well known, little or no description will be given beyond a few points of interest which may occur in them The spindle-celled sarcoma is quite frequent, forming many of the specimens so indiscriminately named "osteo sarcoma" A point worthy of notice in the recurrent growths is the tendency to become softer with each recurrence, and the patient dies, worn out, with rarely secondary deposits in internal organs

Round-celled sarcoma has unfortunately not been clearly defined in oral surgery until the progress in pathology became so marked, and even now it is often named wrong It is still called encephaloid *sarcoma of* Cornil and Ranvier and others, when we to-day usually regard encephaloid not as of the sarcoma but of the carcinoma group, as it originates from glandular epithelium Many of the cases called "medullary" cancer of the jaw belong to the class of round-celled sarcoma Myeloid sarcoma, originally described by Paget, is very common, and found in connection with the alveolus, forming the so called myeloid epulis, and also in the interior of the lower jaw The growths vary enormously histologically In the first place they get their name from the large cells they contain, which closely resemble those found in the marrow of bone, and usually are known by their red color, resembling raw beef, and are named by Butli a mixed celled sarcoma In connection with the pure form of myeloid sarcoma we have myxomatous tissue and bony formation or ossification closely combined The ossification is usually a peculiar shape, the material formed resembles decalcified bone, and contains no lime-salts By using double and triple staining processes the different reactions in the normal formation can be made out very nicely, and the lime deposited by each individual cell, but in the sarcomatous form of ossification it so far has not been shown The ossifying process must not be confounded with cases where the growing sarcoma has decalcified the bone in its immediate neighborhood, this is sometimes the case, especially in bones like the scapula, and portions of this in the middle of a sarcomatous growth will cut like fibrous tissue without any decalcifying process Under the microscope this can readily be made out, the lacunæ in them are larger and often empty, and there are no osteoblasts on their free edges That sarcoma has a decalcifying power is seen in China, where the jaws of horses are often attacked and so softened that you can cut through them with an ordinary knife, just like cutting a piece of cheese Myeloid sarcoma also forms one kind of epulis, and care must be taken in making a diagnosis

Besides these forms, we have alveolar sarcoma, which is a rare and unsatisfactorily described growth By Wedl it is called "a fibrous form of cancer arising from bone," and should be included under cases hitherto given as scirrhus of bone, which is not strictly correct

Fibro-sarcoma grows beneath the periosteum, and closely resembles fibroma

Chondro-sarcoma is a mixed growth, and occurs in both jaws, and frequently leads to secondary deposits in the lungs

Ossifying sarcoma has been classed for greater convenience under the enchondromata and osteomata and myeloid sarcoma

Finally, we have to consider carcinoma, which for convenience has been classed as follows into two groups, according to the character of the cells from which they are formed

Superficial epithelioma squamous epithelioma

Glandular epithelium, *a*, columnar epithelioma, *b*, scirrhus carcinoma, *c*, encephaloid carcinoma

Carcinoma affecting the jaws is only epithelioma of the squamous and columnar form The first variety developing primarily in the mucous membrane of the palate and gums, the columnar form beginning in the antrum or nose The two forms rapidly invade all the tissues, even to the bones When squamous epithelioma begins in the palate or gums it is very often not noticed, and its nature is often mistaken at first Beginning as a small ragged ulcer, it is often attributed to decayed roots or secondary syphilis, etc, and only locally treated Ulcer of the palate of an epitheliomatous character is more frequently attributed to tertiary syphilis, and even large gaps in the hard palate caused by epithelioma are supposed to be the result of a broken-down gumma By involving the subjacent bone, necrosis is induced in the course of an epithelioma, and here again error may arise if the presence of bare bone be regarded as pathognomonic of necrosis, without considering the cause

Much information and profit can be gained by consulting the following works, to which I owe much information, especially the valuable works of Prof C Heath

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Dr J S Marshall said the paper was an excellent one, and the author deserved the thanks of the profession for preparing it Discussing the paper he said that it was often difficult to distinguish certainly malignant growths in the jaws, but he thought it best in cases where there was any real doubt to cut away tissue, though it may be benign, rather than take the chance of letting a malignant growth increase and so endanger the life of the patient

The tumors most frequently seen are called epuloid, and he thought the one described by the essayist to have been of that character These are not usually malignant, but they sometimes take on a malignant character He could not account for the great swelling in connection with a tumor of this size Dr Latham had asked him about it and he had told her he had not seen such a case, however, she had been informed by other dentists that it was common His treatment would be the immediate and thorough removal of such a tumor for fear it would take on a malignant growth

Dr Taft asked how long it had been since the tooth was removed?

Dr Latham answered "In February, no other tissue was removed, the tooth came away quite easily, and the cavity healed up very nicely"

Dr Taft said this emphasizes the danger of making more of a case than belongs to it If the parts returned to a healthy state it would eliminate any idea of malignancy In diagnosing and treating such cases, much attention should be paid to the physical characteristics of the patient If his condition is generally good, it is safe to consider that the tumor is of a benign character, while a tumor of the same appearance and character in one whose system was diseased would probably take on a malignant character He had been called upon to assist a physician to remove what the physicians called an epulis To his surprise, the physician removed the cuspid and bicuspid teeth, then took a saw and cut out a notch including the sockets of the two teeth His own treatment would have been to have considered the growth a little insignificant benign epulis, and he would have removed it with a pair of scissors He spoke of several cases in his own practice of the kind, and said it was well not to be too hasty in pronouncing a growth of this character malignant The growth, origin and causes should be studied, and the case kept under careful observation for some time

Dr Marshall said the only positive way to diagnose a tumor is by the microscope When the tumor is large enough and of such a character that a piece can be cut from it with the scissors he examines it himself, and has it examined by some one in whom he has confidence, and if it is pronounced malignant then he removes it, going deep enough to be sure to remove all the affected tissue By prompt and thorough removal the life of the patient may be saved, but if operation is deferred until the disease has invaded the glands the growths will return at the same, or at some other place, and the life of the patient will not be for long He related the case of a patient, a man about sixty years of age, with an epuloid tumor between the first and second bicuspids on the right lower side There was considerable ulceration, involving gums and cheek, almost to the corner of the mouth On examination it was pronounced an epithelioma He made a most thorough operation, removing three teeth, the alveolus down to the dental canal, and part of the cheek The parts healed nicely, the wound in the cheek by first intention, and fifteen months having passed since the operation, there has been no recurrence of the growth He, however, expected that if the man lived a few years it would recur, either where it was before or in some other place

Dr Taft said that the class of patients operated upon in general hospitals was so far below the class that a dentist or physician would have in his private practice, that it was not safe to accept what was true of one class as applying to the other Hospital patients were to a very large extent little more than wrecks, their whole system broken down by poverty, vice and disease, no vigor or recuperative power, and a disease which could be safely handled and cured under better circumstances was well nigh hopeless with them

He spoke of a case in his practice, of a girl with a tumor on her jaw as large as a pigeon's egg Relief was sought because of the rapidity of the growth Upon examination Dr Taft thought it not malignant Two surgeons were consulted The first one after a careful examination said he could not decide, the second after looking at it two minutes said it was malignant and unless the whole side of the jaw was removed the girl would die of it The decision arrived at, however, was to merely remove the tumor and carefully watch the case Some time after the tumor returned and electrolysis was used, and it entirely healed up and never returned If the advice of the surgeon number two had been taken and the girl's jaw sawed away, she would have been mutilated for life He spoke of the great importance of the dentist being able to judge of the characters of such growths They came under the notice of the general practitioner The best manner of removing them when small and of a favorable shape was by a ligature This is painless and saves what sometimes would be an alarming loss of blood The patient should be carefully treated before and after the operation so as to get and keep the system in the best possible condition

Dr E S Talbot spoke of the growth of secondary dentine as shown in the case of which Dr Latham spoke These growths were difficult to diagnose and they produce periostitis and neuralgia They are most frequent in the pulp chamber and root canal, and neuralgia results The only treatment is the removal of the tooth

Dr J S Marshall spoke of the formation of calcific deposits in the pulp chamber, and said that, at a rule, peripheral calcifications do not give any trouble, but the interstitial form always makes trouble One reason that they are difficult to diagnose is that the patient can not place the seat of the trouble, though sometimes the tooth feels big

Dr A E Baldwin said that it was best when in doubt to treat an epuloid growth as if it was malignant, as it was better to go too deep than by taking the other course to endanger the life of the patient We should however, take advantage of the knowledge of other physicians when attainable, and above all other things fit ourselves to be able to discriminate by a wider and deeper course of study and research The whole field of microscopy is opened by such a subject as this, and it is only the intense and rapid student that can take advantage of the facilities for learning that come to our hands He spoke of a case of his own which he thought was a simple harmless growth, but took advantage of the offer of a friendly microscopist to examine it when it was found to be malignant, and so he operated accordingly

Dr Latham in closing the discussion, said that there were some dentists who never looked further than the tooth they were working on, and she thought they should be more careful to examine the whole mouth and note every appearance of disease, thereby serving their patients better She spoke of a case in her own practice where she had discovered an epithelioma, which would be removed by a surgeon She thought that it was dangerous, however, for a dentist to undertake the treatment, by means of caustics or other remedies, of growths in the mouth unless they had sufficient knowledge to discriminate between harmless and malignant tumors

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SOME SUGGESTIONS AS TO THE RELATION OF THE TEETH TO EMPYEMA OF THE MAXILLARY SINUS

Read in the Section on Dental and Oral Surgery, at the Forty fourth Annual Meeting of the American Medical Association

BY M H FLETCHER, M S, M D, D D S
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In this paper the anatomy, pathology and treatment as usually given by authors on disease of the antrum of Highmore will be largely omitted, since the disease of this cavity is a subject much written upon and consequently these points must be familiar to all who have given the subject any considerable attention It is desired, however, to deal principally with the etiology, believing that if the cause of the disease is correctly diagnosed the treatment is comparatively easy

Authors and practitioners seem to be divided into two classes viz, those who believe that diseases of the maxillary sinus are most frequently caused by dental lesions, and those who believe that they are more largely due to intra-nasal disorders The latter view is held by Zuckerkandl, Schiffert, Chatallier, Krause and Bosworth

Those who look more largely to the teeth as a cause of trouble are Lewis, Baratoux, Noquet, Boucheron, Garel, Gele, Beverly Robinson, Lennox Browne, Garretson and Tiffany In "American System of Dentistry" (page 562) Tiffany says in regard to disease of the antrum "It is not met with as an idiopathic affection, it occurs as the result of injury, and as an extension from a diseased tooth The first and second molars are the most likely to act as the inciting causes, as their fangs *project into the floor of the antrum*"

In treating of the diseases of the antrum, Lennox Browne says "*The cause is almost invariably an alveolar abscess*, which has extended into the antrum through a natural connection with that cavity As in the case of the first molar tooth or breaking down of the slight bony partition in some of the other upper teeth"

Bryant in his last edition says "Suppuration of this cavity is often due, doubtless, to the extension of inflammation from the teeth"

These quotations are a fair sample of the words of most of those men who claim that antral troubles come largely from the teeth, and it would seem that they copy largely one from another This I deem to be a defect in many of our text-books, many men copy from previous writers or write *for* experience instead of *from* experience thus leaving us without additional knowledge

Those writers of contrary opinion cite many pathologic conditions of the intra-nasal tissues as the more frequent cause Among these causes are new growths, catarrhal inflammation, acute and chronic, and stenosis of the osteum maxillare

It is not proposed to go largely into the etiology of the intra-nasal troubles, but give attention more especially to the claims of those who blame the teeth for these disorders The writer's views coincide with those of Zuckerkandl, Schiffert and others who believe these antral troubles are more largely caused by intra-nasal disorders, and I wish herewith to present evidence for such an opinion

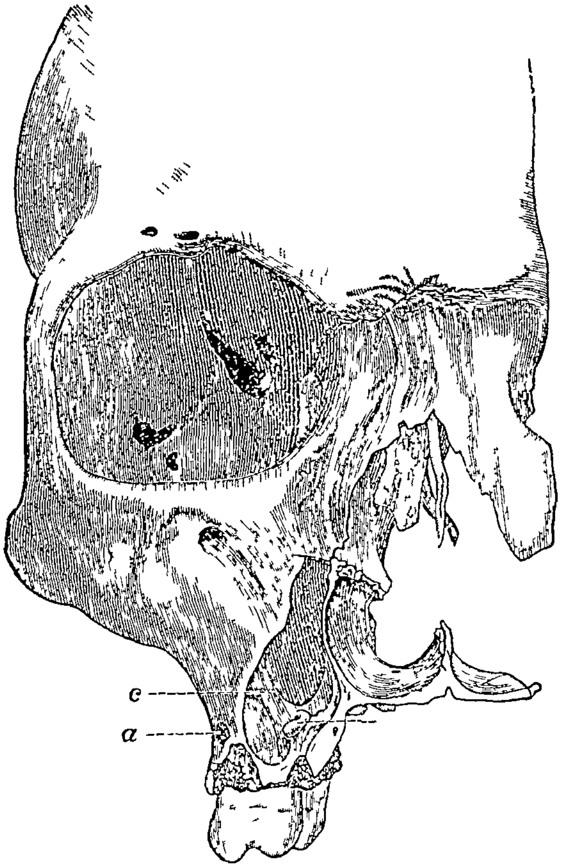

Fig 1

This opinion has been arrived at after some years of experience, in addition to the examination of *one hundred skulls* These skulls were examined with special reference to the relation of diseases of the teeth to the antrum It is known that the anatomy of the antra of the superior maxillary bones and their nervous supply is such that there can be no disease by reflex action from one to the other as occurs, for instance, in sympathetic ophthalmia, consequently these cavities are dealt with as separate organs The statistics then would show two hundred antra, instead of one hundred These skulls were examined for five particular points, viz, 1, for abscessed teeth, 2, for septa, 3, for conical protrusion of the roots of the teeth into the antrum, 4, for perforation by the roots of the teeth without protrusion, 5, for perforation of the antrum from ulcerated teeth

1 As to abscessed teeth and the connection of such abscesses with the antrum Only such teeth are mentioned as might most easily produce antral trouble, viz, the three upper molar teeth, the bicuspid and canine teeth being too far forward to be counted in these statistics I might say, however, that in a number of these skulls evidence of ulceration was found in the bicuspids and canine, with no apparent connection whatever with the antra, save in one case As to the molar teeth, ulceration was found in more than 25 per cent of the cases, there being in these two hundred examinations, fifty-seven ulcerated teeth, and out of these *fifty-seven possible cases* of perforation by inflammation and its results, we found such to be the case *only four times,* all other cases having perforated the alveolar border and discharged the pus into the mouth, two of them discharging both in the mouth and in the antrum, as is evidenced by the specimen No 1 (See Fig 1-b)[1]

This does not show a very large proportion of cases where antral trouble has come from the teeth, being less than 8 per cent in fifty-seven possible cases

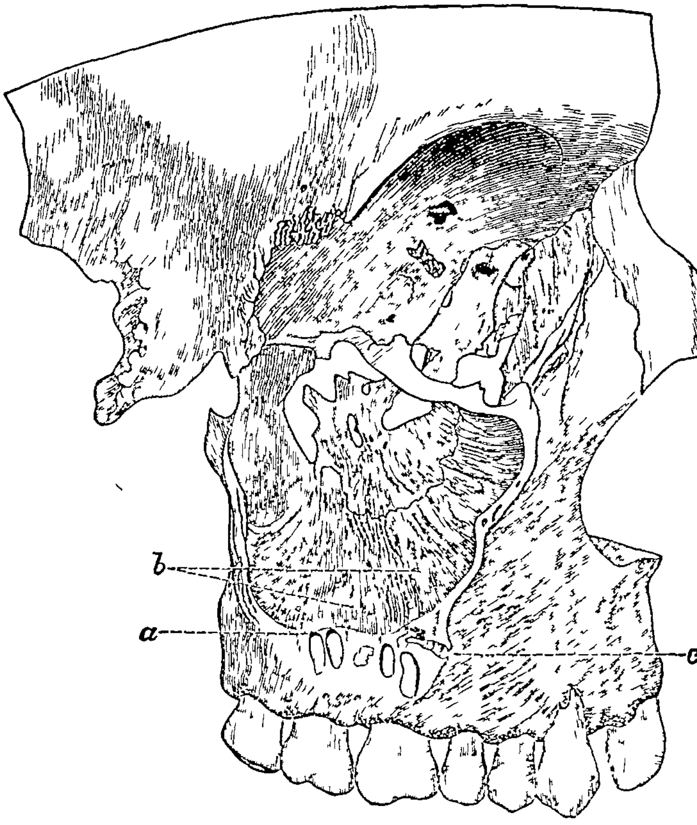

Fig 2

In addition to these figures, I wish to offer as negative evidence, statistics from my own records in regard to the relation of these diseases of the teeth to the antrum, as they have come under the writer's observation I have in the past 10 years treated 916 cases of pulpless teeth Two hundred and twenty-four of these being superior molars, which, according to the authors named above, could and probably would have caused inflammation or pus in the antrum of Highmore Out of this number, from my own records, only one had pus in the antrum as far as examination could tell, and this is the only marked and certain case of empyema of the maxillary sinus caused by the teeth that I have seen

I have, on the other hand, treated a case in which the teeth *were made pulpless by a diseased antrum*, and this I believe to be a condition more frequently brought about than the reverse, from the fact that some of the teeth in the skulls examined, perforated the floor of the antrum with no protuberance, septa or other covering save that of the mucous membrane (See Figures 1 and 2)

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[1] Note—It is so difficult to reproduce these sections by cuts, that the specimens themselves must be seen, in order to thoroughly comprehend many of the points referred to in the paper

Such perforation I have found in eight cases, which number I believe to be smaller than it should be, could all cases have been thoroughly examined for minute openings It must be evident that the mucous membrane covering the apices of such teeth, if diseased, could easily cause the death of a tooth by destruction of its blood and nerve supply, which, in its turn, would produce a dental abscess or inflammation about the roots of the tooth, thus producing a difficult case to diagnose The possibilities are that such diseased teeth having been found connected with the antrum, the teeth have borne the blame *instead of the diagnosis having been* properly made, and the opinion has prevailed that diseased teeth are largely the *cause* of antral trouble instead of the *result* In order that these cases can be properly diagnosed, they must needs be examined by one thoroughly familiar with alveolar abscesses, and the causes leading thereto, which I claim very few persons can do who are not experienced dental practitioners of acute and accurate observation

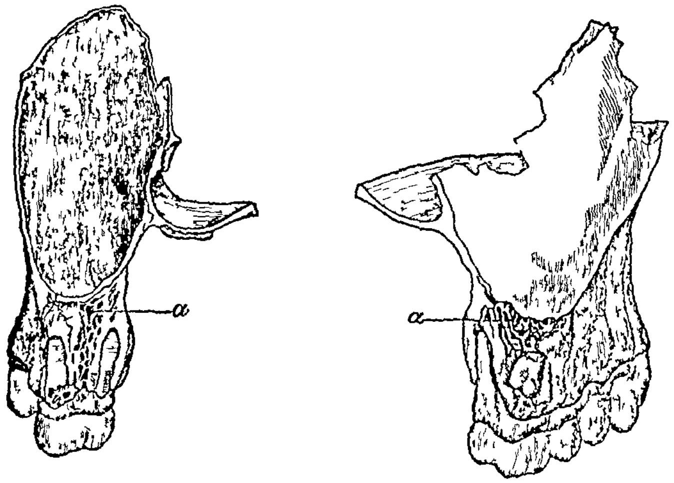

Fig 3

It would seem that these teeth whose roots perforate the antrum, where there is usually neither septa nor protuberance over the roots of the teeth, are more likely to cause the trouble in question than those which show the tubercle above the roots This protuberance in question (pictured by Zuckerkandl, and copied by Bosworth, photographs of which cut I show you), (See Fig 4) seems to be the prevailing idea of the relation of the teeth to the floor of the antrum, but which from my own observation is *quite* erroneous, never having seen but one case which approaches this condition (See Fig 1-a) You can readily see these tubercles are not in the center of the floor, nor in direct line, nor is the floor flat for their reception, as Zuckerkandl's picture shows it (See Fig 4), consequently his illustration seems ideal rather than true to nature It would seem the rational thing (if we are to treat diseases successfully) to first know the anatomy of the parts, then we have the true foundation upon which *to build* our idea of the pathology These two points being founded on the truth, our *treatment* is comparatively easy, whereas if we proceed on an improper conception of the anatomy we are endeavoring to treat imaginary things, and it is *only* through nature's kindness that our patients recover, for nature follows unchangeable laws

Some further observations made in regard to the floor of the antrum are as follows in about 25 per cent of the cases examined, small septa or ridges were found to cross the antrum (See Fig 2) These ridges you will observe have no relation to the position of the roots of the teeth, although in some cases they were found to come directly over the roots in place of the tubercle, as pictured by Zuckerkandl

Another evidence can be presented to show that abscessed teeth do not frequently break into the antrum or cause any trouble there whatever, by taking into consideration the amount of cancellous tissues found about and above the roots of the molar teeth in almost every case By examination of this section (See Fig 3-a), it will be observed that the diploe or cancellous bone about the roots of most of the teeth affords quite ample space for the products of inflammation These spaces being filled with soft tissues, like marrow, easily take on inflammation and the products of inflammation may largely displace them Again, when we have inflammation in this cancellous tissue, and about the apex of the root, we have the peridental membrane largely involved This of itself gives way, as is evidenced by the lengthening of the tooth, and the products of inflammation may easily push down the side of a root and also easily perforate the alveolar process. The alveolar process on the buccal surface over the roots of the teeth being very thin (and often absent in spots), would be quickly perforated, whereas the floor of the antrum is usually thicker and of a dense horny character, consequently it would not be perforated as quickly as the alveolar process, and it seems in these cases that the peridental membrane is very largely affected, which is evidenced by the examination of the sockets and bone where there has been an alveolar abscess, this is readily seen in specimen 1 (See Fig 1) which you have already examined for another point This specimen shows the evidence of a perforation in three separate places, one for each separate root, the two buccal roots having discharged the products of their inflammation in the mouth, and the palatal root opening into the antrum at the apex of the tubercle This ant-

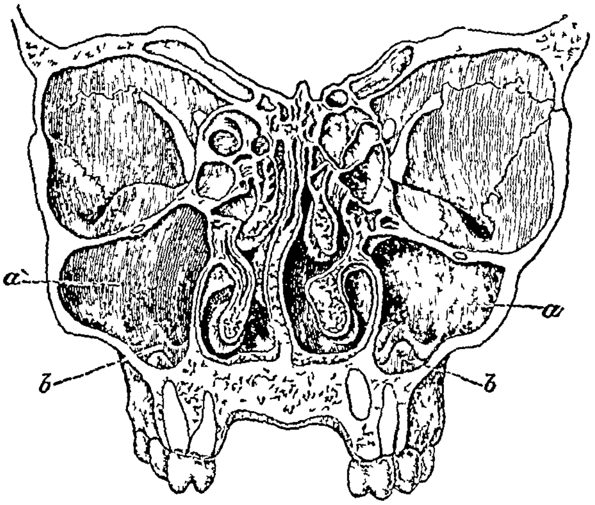

Fig 4

also has a more distinct septum than most that were examined, although I found four or five septa that were even larger than this

I found one case of which I especially wish to speak, and which has already been mentioned Skull No 81 of my examinations has evidence of the worst trouble I found from alveolar abscess In this case the roots of the canine, the first and second bicuspid, and palatal roots of the first molar were involved A cavity had formed in this case reaching from the lateral tooth back to the first molar, and from the alveolar border to the summit of the canine fossa, measuring about an inch in diameter

A septum seemed to have formed or had already been formed between this cavity and the antrum, completely isolating the antrum from any connection with the trouble, although the palatal root of the first molar was involved, yet there seemed to have been no connection of the disease between this tooth and the antrum, although the floor of the antrum could easily have been perforated through the socket of the buccal roots of this same tooth If there was a discharge from this molar at all it showed no evidence in the antrum, but did show evidence in this external and anterior cavity, which seemed to have been the result of chronic inflammation and collection of pus

In regard to the proper place to perforate the antrum from the mouth when demanded after taking the anatomy of the parts into consideration, it would seem that for several reasons the opening should be made between the apices of the second bicuspid and first molar

1 Because this locality is the most accessible

2 A perforation here does not interfere with the blood or nerve supply of either tooth

3 By raising the lip well, and slanting the drill upward and backward, you are sure to strike the floor of the cavity almost at its lowest point

4 If a tube must be inserted, in this position it will be held somewhat in place by the lip, whether the teeth are present or absent

The summing up or rationale, then, of the evidence herewith seems to be

1 That the anatomic relation between the teeth and the antrum is not generally understood, since the sections here shown give evidence of much more cancellous bone than is usually considered to exist

2 Small septa are present in a large per cent of cases, and these septa or ridges have no direct relation to the position of the teeth

3 The evidence seems to indicate that the protrusion of the teeth into the cavity is very largely the exception, instead of the rule, and that if they do protrude it is not evidence that an alveolar abscess would break there, since these tubercles are usually formed of dense hard bone

4 A number of cases have been found where there is a perforation of the bone by the apices of the teeth and no protrusion, but that these apices are simply covered with mucous membrane, thereby the teeth may be affected by inflammation of the antrum, causing their death and loss, or a continuance of the trouble in the antrum by their presence in consequence of this special feature of the anatomy, and that pulpless and inflamed teeth are thought to be the usual cause of antral trouble where the reverse is oftener probably the case

5 Statistics seem to show that a very small per cent of abscessed teeth have any connection whatever with the antrum This per cent probably not being over seven to ten

6 That seemingly the best place to perforate the antrum for pus, is between the apices of the second bicuspid and first molar

Since writing this paper, I have examined an additional 400 skulls and find the figures changed in regard to the per cent of abscessed molars which were connected with the antrum In 500 skulls (*making one thousand antra*) I find 252 upper molars abscessed Making 25 per cent of antra which have abscesses in this locality or every fourth antrum, this per cent is probably smaller than it should be, since many teeth were lost and the alveolar process absorbed away and undoubtedly some of these lost teeth had been abscessed, out of these 252 possible cases, perforation into the antrum was found only 12 times, thus showing over 4½ per cent or about one in every 21 of the abscessed teeth in this locality which communicated with the antrum

DISCUSSION

Dr Talbot said, having in the last fifteen years made over twenty thousand examinations of skulls, he had found some of the conditions noted by the essayist Of the skulls of civilized persons he had noticed many of these separations of the antrum, but he had never seen such in ancient skulls or the skulls of pure races There is a state of things not brought before you by the paper, it is arrest of development of the bones of the face This is a condition very common in civilized cities especially In these cases the antrum is about half the size of the antrum in pure races, and it is such cases where protrusions occur as shown in the specimens exhibited He said he would like to ask how the treatment would be carried out where a septum nearly closed the cavity? Would there not have to be two openings? There is much variation in the shape and size of this cavity in different skulls and it would be well if they were classified as to shape and size and other peculiarities He had found a number of cases where the opening from the antrum into the nose had been closed up, owing to the arrest of development of the bone

Dr Latham said every one knows the difficulty of deciding where to open into the antrum, but she thought the best place was from the socket of the first or second molar, when these teeth are missing or can be extracted A good way to get rid of the pus, when the patient will help you is by means of constant irrigation, that is by washing out with the syringe ten or a dozen times a day

Dr Clifford said he was impressed with the desirability in cases of antral trouble not to depend upon local treatment In many cases by treating systemically and getting the system in first rate condition the catarrh will dry up without other treatment In cases of purulent secretions of any nature, or affecting any part of the system, constitutional treatment is of the greatest importance

Dr Fletcher in closing the discussion, said that he had not aimed at going into the question of treatment in his paper but had wished to present the case in a pathologic and anatomic light We should find out what a diseased condition is before we undertake to cure it In regard to the septum in the antrum, he said if the perforation was made just where indicated, and the patient assumed a horizontal position, every part of the antrum would drain, except in a case where the septum extended clear or nearly across, when of course there would have to be another perforation If the first molar is absent the best place for the perforation would be through its socket In every case he had examined, this would enter the antrum In treatment he favored both constitutional and local treatment Some cases are very tedious He had one now which he had been treating for five months and it was not cured yet

SYSTEMIC MEDICATION IN DENTAL PRACTICE

Read in the Section on Dental and Oral Surgery, at the Forty fourth Annual Meeting of the American Medical Association

BY EDGAR PALMER, D D S
LA CROSSE, WIS

Let us consider first our specialty in its physiologic and pathologic aspect

It is supposed that all who are associated with this Section are of the opinion that "dentistry is a specialty of medicine"

It is sufficient for me to base my remarks upon the simple fact that an all-wise Creator has given man organs of mastication much after the same manner and for an equally important service as the organs of hearing and sight, and these organs being subject to abuse, disease and functional derangements, thousands of persons are required to devote their lives to their care and treatment I am aware it is asserted that this great army of scientific men are, by the mechanical character of their methods, too far removed from the province of general medicine to be entitled to the privileges accorded to the oculist or aurist in giving attention to functional disturbances remote from organs over which they have special charge I confess that my eyes are too weak to see the distinction, and my ears too dull to hear the voice of duty calling louder in one case than another All the ambition and desire of the last years of my school life was centered upon the one thought of some day entering upon the practice of general medicine and surgery An empty purse obliged me to take up something else, and as a temporary expedient I took my place at the foot of the ladder upon which the dental profession was then slowly climbing toward the distinguished eminence which it now occupies in the department of science

The status of dentistry to day is most gratifying For many years every force and pressure of intellectual progressive effort has been brought to bear upon the creation of a higher standard of qualification, and while we have done much, there is opportunity to do more to exalt and commend our services in this general and beneficent cause of humanity

I can confidently say that now, after more than thirty years' constant practice of this specialty, I am as near the practice of general medicine as I ever expect to be This branch of the healing art, with its achievements, is good enough, and its resources and beneficent possibilities stimulating enough for any purpose save avarice and greed The words of Daniel Webster in relation to the practice of law are so germane to this thought that I quote them here

"Our profession is good if practiced in the spirit of it, it is damnable fraud and iniquity when its true spirit is supplied by a spirit of mischief-making and money-getting The love of fame is extinguished, every ardent wish for knowledge repressed, conscience put in jeopardy, and the best feelings of the heart indurated by the mean, money-catching, abominable practices which cover with disgrace some of the modern practitioners of law"

The application of the established principles of general medicine was a matter but little considered in the first years of my practice I frankly say it is comparatively but little understood by me to-day This much we do know, however, that it is the province of the dentist to search for bodily manifestations in health and disease which may bear upon the interpretation of dental function We do not deal with the human teeth as though they were a mere mechanism of bone and pulp and nerve, or deal with their functions as an independent agent, with little or no concern or relation to other organs and the whole life of the being, but recognize a vital harmony and essential interdependence—the orderly subordination and coordination of parts each dependent upon the other for functional activity

The magnetic influence and electric force of all nerve supply, and the effects of fully charged abundant blood courses, bring to our aid a health-giving action upon which we can build pledges of success, while on the other hand, lacking in vitality, a system with evidences of derangement in formidable disturbances, neurasthenic in character, we are safe in predicting an aggravation if not the direct source of dental lesions

The only conspicuous inheritance three-fourths of the human race confer upon their offspring is a stunted development and impaired structural formation of the different organs that so universally beget disease

Temperament and disposition are not more certainly marked upon the child than the impoverished condition of all nerve and blood-supply, from defective nutrition and assimilation, and as such conditions in the child are rarely obliterated during life, they should not be neglected in our practice for physiologic, pathologic, and diagnostic purposes at any time

The organic origin of pathologic processes influencing local lesions, has for many years impressed itself upon my mind as a subject worthy of our earnest consideration As long ago as 1878 I was permitted to read a paper before the American Dental Association upon this subject I say "permitted," because that honorable body has a peculiar system of quarantine, requiring every immigrant, suspected of having contracted germs of progress, to be searched My paper when returned to me bore a verbal indorsement something like this, in sentiment We, the undersigned Sanitary Committee, have discovered in this, microscopic traces of an idea, but as we do not regard it of sufficient virility to infect any great number, you have our permission to read it Whether the idea discovered by that Committee was what I intended to embody in my effort or not, I never learned, but if so, it was this, That the hyperemic condition consequent upon the saturation of the tissues of the body with alcohol, so strangulated the vascular and nerve supply as to cut off proper nourishment from the dental membranes, and indirectly establishing a retrograde metamorphosis of the nerve fibrils of the tooth, prolific also of neuralgia and often attended by wasting of tissue, as in decay, under such circumstances of impaired nutrition

The mysterious force which inhibits itself in the sensitive protoplasm of a muscle is a phenomenon of no less interest to us than to the general practitioner

The scientific investigations carried on by dentists during the last decade to put this profession, as well as medical men, in possession of agents which lessen the vital activity of pathogenic parasites, is evidence of an intellectual and progressive spirit m mendable, as well as interesting and valuable to all practitioners of the healing art

Why, then, let me ask, in view of all that our profession has achieved in this line of scientific work, and in view of our rigid system of dental education in all branches which general medicine requires of other specialists, are we prohibited from exercising this knowledge we are expected to possess, in the treatment of such systemic conditions as directly influence a dental lesion?

Brought daily face to face with all these exciting and retarding influences which you so well understand, must we forever lock the door leading out of the oral vestibule into the wonderful habitation of man's vital forces, and turn the key over to the family physician?

How many dentists, out of two hundred in this country of whom I recently asked the question, do you suppose answered that they prescribed constitutional treatment independent of the counsel or advice of the physician? The number is too few to stimulate me in carrying on the investigation any further

But notwithstanding the majority of our profession, men whose views are worthy of the highest regard, express themselves as adverse to the practice of administering medicines themselves, I believe the day will come when it shall be considered within the province of the medically educated dentist to make recommendations for general physical ailments affecting the organs given into his care There must always be a courteous recognition of the rights and duties of the physician, but *within a common sense limit* I believe "it is better to experience the truth and enjoy its practical uses, even without a perfect knowledge of every theory, than to have full mastery of the theory but reap no benefits from it"

Dr J Taft said that it was in the experience of every practitioner of dentistry to have the question raised about the need of systemic medication as a necessary part of the treatment of diseases of the mouth and teeth He could see no reason why a dentist should not modify by treatment the systemic conditions which hindered the success of his operations in the special line of the profession which he practiced Why should he not treat the system, as well as the oculist or any other specialist who found the patient in an unfit condition for treatment for the diseases which their specialties would cover? The only reason this question should ever come up in regard to the dentist is because, unfortunately, he is not usually willing or able to diagnose or prescribe for physical conditions outside of the oral cavity The ophthalmologist, the aurist, and every other specialist, having laid the foundation of their professional skill in the studies of general medicine, and turned their attention afterward to the specialty chosen, are fitted to, and unhesitatingly do, prescribe when necessary to change the conditions of the system, so as to favor the success of the contemplated operation It is just as important that the dentist should be able to do this as any other specialist

The diseases of the teeth are influenced by the diseased conditions of the other organs, and it is patent to every intelligent operator that his success in dealing with the teeth and mouth, the diseases of the alveolus, mucous membrane and antral cavities, will depend largely upon whether he can place the general system in the condition which will favor his success Until there is a toning up and strengthening of the general system it is often worse than useless for a dentist to operate

This is not all There are signs of diseases which come under the dentist's eye more serious than merely a run-down system, and he should be able to recognize such peculiar conditions in a degree, and at least understand the relationship between such conditions and the disease in his peculiar domain, even if he prefer to refer the case to a regular practitioner or specialist in some other branch The dentist should be able to refer the patient to the physician, giving a fair diagnosis of the case If a physician received a patient from a dentist with only the message "Something is the matter, find out what it is, and bring about a better state," he would not have a very high opinion of that dentist's standing as a specialist in medicine

All our medical teaching is based upon the idea that for every specialist a general knowledge of the whole system of medicine is necessary If it is not necessary for the dentist, why should he study anatomy and physiology? If it is not necessary, why should he study general pathology? It is necessary, for if he does his whole duty in his profession, he must need this learning to enable him to recognize and treat such general conditions And more than that, it is necessary for the treatment of such diseased conditions as are recognized as belonging to his own specialty The course of an abscess on the gums or necrosis of the jaw is the same as abscess on any other of the soft tissues and necrosis of any other bone

Dr John S Marshall said that when a dentist did not feel able to treat systemically when it was necessary, it was the fault of our former faulty system of teaching in the dental schools Until recently it was generally considered that a dentist had no need of the knowledge of general medicine No one would go with a diseased eye to one who was not a graduate of medicine, and the feeling about dentists should be as it is about oculists The dentist should be as able to treat general disease as any other specialist He would be sorry if he could not prescribe for any condition which would hinder the success of the treatment for which the patient had come to him Our field is the mouth, not merely the teeth We must be able to treat systemic conditions which we observe indications of, and if we are properly educated so as to be able to diagnose them, why should we not?

Dr Vida A Latham said she would like to ask the Section a question bearing on the subject of the paper, and also upon professional ethics or etiquette The question is, May a dentist suggest to a physician the necessity for a general line of treatment for disease of the general system? Dr Latham related the case of a patient of hers, a young man about seventeen years of age, who was a hard student His teeth had been sound and apparently good until he had an acute attack of pneumonia, when it was found that in the course of about four months, either because of the disease or of the treatment, cavities had appeared in nearly every tooth When examination was made, the young man was so weak that he fainted in the office Dr Latham called the attention of his mother to the state of his teeth as well as to his physical condition, and recommended that he be put in charge of his physician, as she thought there was a serious danger of a relapse into pneumonia The physician declared that he was in need of no further treatment The consequence was as she had foreseen, a dangerous relapse, which leaves him at present with a second severe attack of pneumonia Dr Latham desired the opinion of the members of the Section as to whether she had done more or less than she should in sending the patient back to the physician for treatment

Dr E S Talbot said that the whole question of the relations of the dentist to systemic medication and to the general practitioner was affected by the faulty system of dental education, which is entirely wrong He spoke of a gentleman who held a position in a medical college and also in a dental college The faculty of the medical college was pleased with him, but after the first year the faculty of the dental college declared that his lectures were too far advanced for the dental students, that they did not care to go so deep into things, and they were dissatisfied with him on that account

The condition and the ambition of the dental student of to day is little better and little higher than it was twenty-five years ago He only cares in most cases, for just enough general medical and physiologic knowledge to get for him the diploma, and when he has secured that he forgets all that is not, in his opinion, necessary for his success as a dentist

The specialists in other departments do not feel so They generally have practiced a few years at least before taking up a specialty, and are competent to treat any diseased condition which presents itself to them The dentist, on the other hand, could not diagnose diseases of the general system, and not being a graduate in medicine would not dare to treat them For himself, he said that his education was all the wrong end front, as he had practiced before attending any college, and afterward had taken a medical degree The proper course would be the exact reverse of this First the medical degree, next the dental and afterwards the practice There are comparatively few of his patients that he does not prescribe systemically for He has no sort of hesitation in considering himself a part and parcel of the medical profession, and in such a case as Dr Latham reports he would go to the family physician and point out to him the condition of the young man and his need of treatment He often has cases where he sees conditions which make it necessary to send the patient to a physician

Dr Edgar Palmer said that he thought when a patient whose physical condition was such as to make it impossible for the dental work needed to be done came to the office, the dentist should prescribe what will alleviate the condition There is a long list of troubles we do prescribe for, in preparing the system for the surgical operations in the mouth, but of course there is a common sense limit, and we should not take upon ourselves the responsibilities of the general practitioner

Dr John S Marshall said Dr Latham's question had not been fully answered yet It was, Had she the right to go to the physician and tell what she had discovered? He thought she not only had the right, but that it was a duty

Dr George V I Brown agreed with the ideas which had been advanced, but thought that the education of dentists is improving and rapidly too The dentist should know how to prescribe, but should be careful not to encroach on the field of the general practitioner, and so raise feelings of jealousy More trouble comes to the physician's patients from not consulting the dentist than comes to the dentist's patients from not consulting the physician If he had a patient who was not getting from his physician proper treatment, he would not hesitate to recommend a change of physicians This would rarely be necessary, but sometimes it would

Dr Anderson said he saw no reason why the dentist should not apply all the knowledge he had in any direction for the benefit of his patients If, however, the dentist neglects his own specialty to learn to practice general medicine, he would lose opportunities for advancement in his own special line

Dr W H Carson said that to discuss the question asked by Dr Latham was equivalent to admitting that we were not specialists in medicine If we are members of the medical profession, then of course we should consult with the family physician Unfortunately, the majority of the dentists are not properly educated, they are not competent even to write a prescription This should be changed, we should be physicians first and specialists afterward Dentistry is looked upon by students as a more easily acquired profession than medicine, and those who are unable to acquire the latter feel that the former is within their reach, and thus it comes that the class of students at dental colleges are less highly prepared, educationally, and probably mentally, too This should be changed, as much should be required of the dental student in the way of study as of the medical student and the requirements for matriculation to the dental student should be as high

Dr Taft regretted that the mass of the profession did not appreciate the necessity of a good general education as a foundation for the professional education The low standard of education required for entering the colleges is not so much the fault of these institutions as it is the fault of the profession Almost every student is sent to the college either directly from the office of a preceptor or at least has taken the advice of some dentist as to the step This is where our responsibility is If an unfit man asks your advice about studying dentistry, persuade him not to study it Most of the dentists have very little knowledge of general medicine, yet if they would they could get this knowledge, and they should take hold and master it, and they would do so if they could appreciate the necessity of it On the other hand, the medical profession do not appreciate the diseases of the mouth This is because they have so many things in their course of study that the diseases of the special organs are not taught thoroughly in the colleges

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NEW DEVICES FOR CUTTING BONE

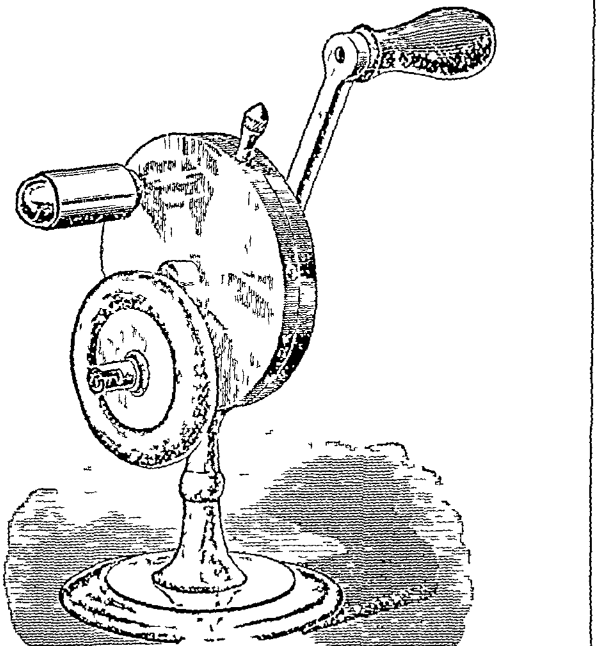
Read at the Nineteenth Annual Meeting of the Mississippi Valley Medical Association, held at Indianapolis, Ind , Oct 4-6, 1893

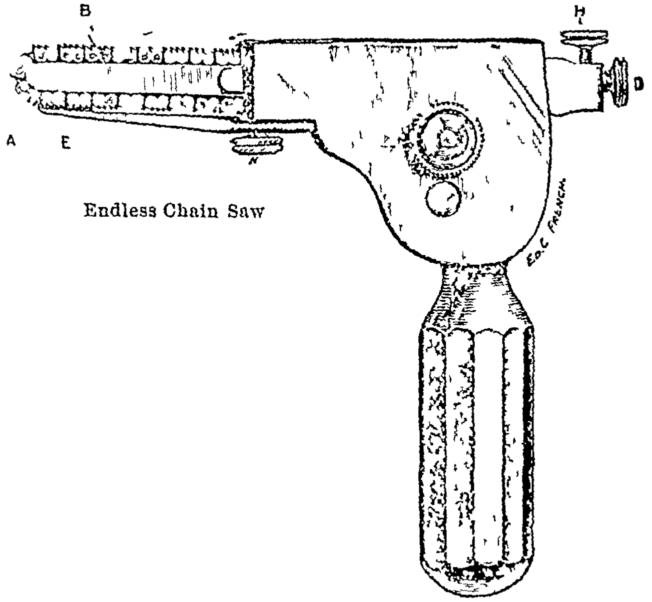
BY ALLEN DE VILBISS, M D

TOLEDO, OHIO

It is the exception and not the rule that new devices are made perfect from their first conception, they require repeated changing to strengthen weak parts and shape them suitable for the work intended One may develop a device so that there seems to be no need of farther change, but when put to a practical test some points are liable to be discovered wherein it can be made better This has been my experience, and the instruments I will show you have been developed through a series of practical tests I have used them first upon the dead, afterward upon the living I could report case after case of operations made with them on the skull, maxillary bones, ribs, nasal bones, etc , but the time I wish to occupy with this paper will not permit me do so I will only try to give you a few points in regard to their construction and how they are to be used Many a useful instrument has been brought into bad repute for lack of a thorough knowledge of its technique Not only is the reputation of the instrument sacrificed but the patient suffers the consequences The time, I hope and believe, is not far in the future, when the surgeon will of necessity, have to be in possession of more than a theoretical knowledge of surgery He should in the first place possess some inherent mechanical ingenuity, also a perfect knowledge of the technique of each instrument used, not only the knowledge, but he must have educated his hands how to execute that which he theoretically knows

The chisel and mallet are simple devices, yet many surgeons do not know how to hold the chisel, so as to do the greatest amount of cutting, with the least amount of jar to the part operated upon This skill is only acquired by patient practice The instruments that I will show you are not intended for the class of operators who have not the time or are not willing to study them sufficiently to be equal to any exigency that may arise The objection has been offered to instruments that run with speed by transmitted power, that they are too complicated and require too much time to understand them, too liable to get out of order These objections will be retired just as soon as instruments of this class can be made more perfect in construction, and surgeons have sufficient time to become thoroughly educated in their use Where is the man who would take up the flail and set aside the improved threshing machine of to day, the jack plane and do away with the automatic planer The answer comes that he can not be found The most convenient plan for propelling instruments is a hand engine I think the only objection that can be offered to it is, that it requires the help of an assistant It is made of brass, nickel plated its speed is produced by the use of two internal gears, and two spur gears, that run in oil to make it noiseless Its bearings are positive, hence no chance to get out of order and is always ready to do its work if properly handled It is better than the dental engine, or small electric motors that are now in use, as more power can be produced by it than either of them It can be used anywhere as it is small and weighs but a few pounds To operate it, place the finger of the left hand on the stationary handle, and the thumb around the post on top of the main cylinder, resting it on the abdomen, stand, operating table, or clamp it to a high stool, which is easily moved about to suit the convenience of the operator The power is conducted by means of a flexible cable which is ten times as strong as the dental or surgeon's cable now in use, and unlike it, will not break when needed most The person who is to run the engine should be instructed, before commencing an operation, to keep close enough to the operator to prevent stretching the cable, as he would impart his movements to the surgeon's hand also to avoid greater angles than 45 degrees, as it would create friction in the angle from the cable on its sheath and make hard running, and last, but not least, that he can do no harm by turning fast but can by turning too slow


Hand Engine

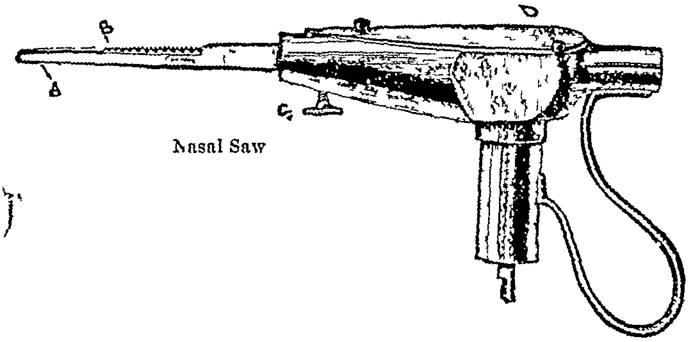


Endless Chain Saw

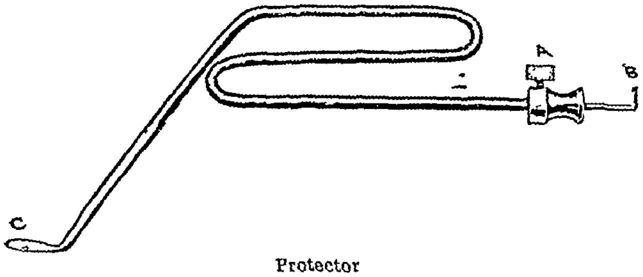
I will next call your attention to an endless chain saw, which is moved in a definite direction over its carrier at the rate of two thousand revolutions per minute This saw is especially adapted for making exsections, trephining, cutting away portions of the maxillary bones, ribs, etc To operate upon the skull, first bore through with this drill I show you, which is an ordinary twist drill with its cutting end ground as square across as possible, and leave a fixation point, it is fitted to the cable and provided with a slide and set screw, so that it is impossible to cut any deeper than is intended, if not deep enough at first setting of slide gauge, place it again and again, thus repeating the cutting until the dura is reached Then take the protector in the left hand, passing its foot piece in the opening and beneath the internal table This can be readily done unless there are firm adhesions of the dura mater, in which case they will have to be broken up, then cut through with one or more strokes as may be needed, following up the saw and protecting the membrane by the protector foot as you cut The stem of the protector is so slim, that it will follow in the slot the saw makes The foot piece being in advance of the stem is conse-

Nasal Dilator, with bands in position

quently always between the dura mater and its cutting edge, it matters not if you strike the metal foot piece as it will not injure the saw By using the instrument in this way there is less danger in removing portions of the cranial bone than by any other method The preparations necessary for the operation are the cleansing and cutting down upon the bone in any desired manner The saw is prepared in the same way as any other instrument, by boiling it and placing it in a carbolized solution, or what is better just before using it, is to hold its point in gasoline (which is an excellent antiseptic), then by giving a few turns of the engine handle, the fluid is made to cover and wash all parts making it perfectly aseptic After the operation the saw should be taken apart, washed, dried, and run in gasoline as before described It is so constructed that it can be taken apart and put together in one minute's time The shield passes beneath the cutting edge of the teeth, its outer edge being ground sharp so as to separate tissue that may come in contact with it It also serves to gauge the depth the saw is to cut each time it is carried along the bone In making the first cut the shield should rest on the bone, the next time on the bottom of the slot made by the first cut and this repeated until the desired depth is reached If in cutting away portions of the spine we are afraid of penetrating too deeply, we can make it cut less in depth by increasing the angle of the saw to the horizontal plane of that on which we are operating, by following this plan you may know exactly how deeply you are cutting each time In removing portions of the inferior maxillary bone, clavicle or ribs, where there is to be a complete section taken out, I draw beneath the place to be sawed, a piece of sheet steel, which is about ten-thousandths of an inch thick and is easily bent, so as to be readily slipped under and drawn to its central portion I usually use a strip from four to six inches long, so that it will serve as a retractor of soft tissues on each side of the bone and protect the tissue beneath it



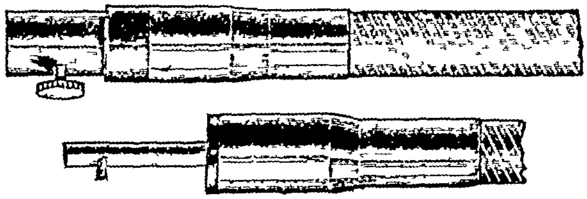
Nasal Saw



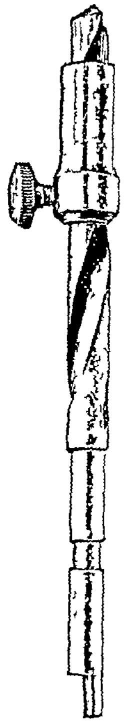
Protector

In the use of this saw the main points to be remembered are, first, to secure proper tension, to always draw the saw toward you when cutting, never from you to not crowd it, and that the engine can not be turned too fast but can be too slow

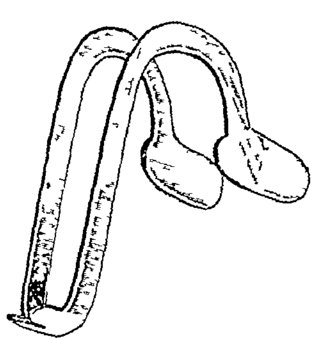
I will now show you a saw that although it can be used for many other purposes was intended for intranasal work, it can be attached to the cable and run fast enough that the to and fro movements will be two thousand per minute It is simple in its construction, consisting only of a handle, pitman wheel, pitman bar, saw shield and one set screw You will see that the saw moves in a grooved director its entire length which prevents it from injuring tissue at its extreme point, also from getting out of the slot it is cutting It can be reversed to cut up or down by loosening the set screw The grooved director may be removed, then turn the cover to the right, lift out the saw and reverse or clean as may be desired It is easily operated as we have only to move it in the direction desired to cut through, except in a broad surface, when it will be necessary to give a short to and fro movement, in order that the saw teeth may clean themselves, and prevent filling of the interspaces Herein lies the trouble in using the ordinary saw, we can not give length of stroke sufficient to make it empty, without getting out of the slot we are cutting, or punching tissue with the end of the saw, and it will soon pass over the surface as though it was dull or had no teeth



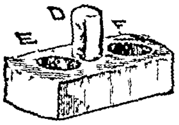
Cable



Drill with Gauge



Nasal Dilator



Templet

The teeth as I have them made, are different from any I have seen, being cut square across, with each alternate tooth on both sides cut out one-half their thickness, which leaves an open space for the material cut to fall out, and prevent clogging They have the appearance of being set but are not This saw has a stroke of seven-eighths of an inch, which is sufficient as a rule, when it is not, it can be doubled by carrying it back and forth Any one who has used small saws often, or tried to use the power saws as devised by Drs Roe, Potter or Brown will appreciate the grooved director connected with this saw, and it is this part and the form of the teeth that I claim to be new I have had a few cases where there was not room in the nasal cavity to use a saw and I made an opening with a trephine, this one that I show you can be used to make this opening, also for the same purpose as Dr Curtis and Dr Jarvis use theirs, it differs from them, as the external part can be turned to the right and slipped off, thus making it an antiseptic instrument, also the end of the crown is made knife-like, the same as the Foster wood bit except there is no part cut out, it forming a complete circle serving as a fixation point, thus preventing it from running off to one side like those with teeth on

I notice that in Dr Jarvis' article (in Burnett's System of Diseases of Nose and Throat), that he says he has recently modified and improved his drill by simply surrounding the cutting facet by a knife-like ring, the edge of which may be either interrupted or unbroken I use the cylinder on a single lipped twist drill which I devised for this purpose I find it empties better than Dr Jarvis' with its opening on the side or Dr Curtis' with its opening at the end of the cylinder It is essential to the successful use of cutting instruments in the nose, to have some means of positive continued nasal dilation, and I hope you will pardon me, when I say that I have devised another nasal dilator and I think it a good one Whether you will agree with me or not in this is a matter of the future, after you have tried it, as we have no right to recommend or condemn until after we have made a practical test The objection to wire nasal dilators is that they do not hold the vibrissæ in the vestibule back, blood flows and obscures the light, this one you see is flat, and in shape corresponds to the internal lateral shape of the vestibule, it may be used without the rubber bands for explorative purposes and with them for operations

The drills spoken of in connection with the chain saw, are made in two sizes, with movable gauges, and will be found to be useful in operations of the mastoid frontal sinuses, antrum of Highmore and in cases of osteomyelitis, etc It is true in making the mastoid operation, the use of the drill has been condemned, but the reason for it is this, that until now there has been no convenient way of running with speed, a drill large enough, with precision as to depth, to make a sufficient opening I drill one hole through the cortex, if not large enough, with the aid of a templet I drill another beside the first, then use the second size drill which has a gauge large enough not to enter the first opening, or in some cases it may be preferable to complete the opening into the antrum with the gouge In the use of the instruments just described, speed is necessary in order to do perfect work, and it does not increase the danger There is not a dentist who would be willing to return to the use of the hand burr, or consider it safer than the use of one connected with the dental engine Neither will the surgeon be willing to set aside instruments with speed, after becoming accustomed to using them

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Blank Applications for membership in the ASSOCIATION, at the JOURNAL office

NECROLOGY

Dr N L Lusk of Penn Yan, N Y, December 4

Dr John Rix of Fort Madison, Iowa, December 14

Dr Eli Dudley Pocock of Shreve, Ohio, December 16

Dr Stephen Herrick of Muscatine, Iowa, December 16

Dr Joseph R Hoffman of Morriston, N Y, December 11

Dr Alonzo Spofford Ball of New York, December 20, aged 93

Dr William B Carpenter of Leavenworth, Kan, December 16

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SATURDAY, DECEMBER 30, 1893

PROFESSOR SENN'S GREAT GIFT TO THE MEDICAL PROFESSION

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Professor Nicholas Senn has given his great collection of medical books to the Newberry Library

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The value of the gift to Chicago, and to the medical profession, can not be estimated in money, for as Milton says "A good book is the precious life blood of a master spirit embalmed and treasured up on purpose, to a life beyond life " "How much," says Burton, "are all we bound that are scholars, to those munificent Ptolemies, bountiful Mæcenases, heroical patrons, that have provided for us so many well furnished libraries, as well in our public academies in most cities, as in our private colleges?

"*O quam te memorem (vir illustrissime) quibus eloquis?*"

Prof Senn has for many years been engaged in the gathering of this magnificent collection, but for the most part the gems of the library were obtained by purchase from the estate of Professor William Baum, Professor of Surgery, University of Gottingen He was one of the founders of the German Congress of Surgeons, and for fifty years had been collecting works on anatomy, physiology, surgery and the old classical authorities Professor Baum died in 1886, and his estate offered the library for sale The wish of Professor Baum was that the German Congress of Surgeons should purchase the library, but that organization did not see their way clear to meet the expenses The administrator of his estate publicly stated that Professor Baum had spent over forty thousand dollars in its purchase The administrator offered the library to various parties, and the Royal Library of Berlin offered an almost fabulous price for a number of antiquarian volumes contained in the collection, but the administrator, following the wishes of Professor Baum, refused to separate the books, and announced that it would be sold by auction This coming to the ears of Professor Senn, he at once secured it by making a partial payment, and then withdrew it from sale The books were shipped to Professor Senn, then in Milwaukee, in fifty-two cases, constituting an entire car load

Beside the works on surgery, gynecology and ophthalmology in the Baum library, the collection contains a full set of Virchow's Archives, several single volumes of which are now valued at $50 each Langenbeck's Archives, Jahresbericht der Gesund Medicine, Cannstatt's Jahresbericht, Praguer Vierteljahreschrift, and the Deutcher Chirurgie (The continuation of these periodicals from time to time by the terms of the gift, the Newberry Library must hereafter procure as published) To the foregoing, Professor Senn has added nearly all the modern works on surgery, which includes gynecology, and allied branches He will retain his working library of modern works, and a few old favorites to which he is naturally attached The first thought of this action was suggested by Mrs Senn, who appreciating the value of the library, pointed out the insecurity of a private house from fire and other casualties, and Professor Senn concluded that he would place the collection at the disposal of the profession There are thousands and thousands of pamphlets, ancient and modern, and atlases almost numberless All of these go with the collection, the money value of which is about fifty thousand dollars

When Professor Senn came to make the formal tender of the transfer of his books, he had a pang of regret, but Dr Poole the librarian, consolingly said that the Newberry was only five minutes walk from his house and he would keep them for him No bibliophile can part with his books without regret, and yet in this action Professor Senn has built himself a monument more enduring than bronze or marble, for generations of medical men, long after those now on the stage shall have passed away, will draw inspiration and wisdom from the "Senn Collection," in the Newberry Library, and as often with gratitude reflect on the noble generosity of its distinguished founder

THE OMENTUM

The American Journal of Obstetrics for December contains a paper read before the Pan-American Congress by Dr James F W Ross of Toronto, on "The Omentum and the Rôle it plays in Operative Work upon the Abdomen " It is strange that an organ so important to the surgeon should be so little studied by carrying it back and forth Any one who has used small saws often, or tried to use the power saws as devised by Drs Roe, Potter or Brown will appreciate the grooved director connected with this saw, and it is this part and the form of the teeth that I claim to be new I have had a few cases where there was not room in the nasal cavity to use a saw and I made an opening with a trephine, this one that I show you can be used to make this opening, also for the same purpose as Dr Curtis and Dr Jarvis use theirs, it differs from them, as the external part can be turned to the right and slipped off, thus making it an antiseptic instrument, also the end of the crown is made knife-like, the same as the Foster wood bit except there is no part cut out, it forming a complete circle serving as a fixation point, thus preventing it from running off to one side like those with teeth on

I notice that in Dr Jarvis' article (in Burnett's System of Diseases of Nose and Throat), that he says he has recently modified and improved his drill by simply surrounding the cutting facet by a knife-like ring, the edge of which may be either interrupted or unbroken I use the cylinder on a single lipped twist drill which I devised for this purpose I find it empties better than Dr Jarvis' with its opening on the side, or Dr Curtis' with its opening at the end of the cylinder It is essential to the successful use of cutting instruments in the nose, to have some means of positive continued nasal dilation, and I hope you will pardon me, when I say that I have devised another nasal dilator and I think it a good one Whether you will agree with me or not in this is a matter of the future, after you have tried it, as we have no right to recommend or condemn until after we have made a practical test The objection to wire nasal dilators is that they do not hold the vibrissæ in the vestibule back, blood flows and obscures the light, this one you see is flat, and in shape corresponds to the internal lateral shape of the vestibule, it may be used without the rubber bands for explorative purposes and with them for operations

The drills spoken of in connection with the chain saw, are made in two sizes, with movable gauges, and will be found to be useful in operations of the mastoid frontal sinuses, antrum of Highmore and in cases of osteomyelitis, etc It is true in making the mastoid operation, the use of the drill has been condemned, but the reason for it is this, that until now there has been no convenient way of running with speed, a drill large enough, with precision as to depth, to make a sufficient opening I drill one hole through the cortex, if not large enough, with the aid of a templet I drill another beside the first, then use the second size drill which has a gauge large enough not to enter the first opening, or in some cases it may be preferable to complete the opening into the antrum with the gouge In the use of the instruments just described, speed is necessary in order to do perfect work, and it does not increase the danger There is not a dentist who would be willing to return to the use of the hand burr, or consider it safer than the use of one connected with the dental engine Neither will the surgeon be willing to set aside instruments with speed, after becoming accustomed to using them

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Blank Applications for membership in the Association, at the Journal office

NECROLOGY

Dr N L Lusk of Penn Yan, N Y, December 4

Dr John Rix of Fort Madison, Iowa, December 14

Dr Eli Dudley Pocock of Shreve, Ohio, December 16

Dr Stephen Herrick of Muscatine, Iowa, December 16

Dr Joseph R Hoffman of Morriston, N Y, December 11

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That it must have some other use, the immense lymphatic and blood supply would seem to indicate The membrane also reaches its highest point of development in the mammalian group, though it is interesting to note that it is only slightly developed in the whale As Dr Ross points out, if it had been simply intended for the preservation of heat, one would expect to find a full development among the cetaceans, as well as the other members of the family

Tait, as quoted by Ross, says that in some patients suffering from dropsy due to peritoneal papilloma, the effusion may be made to come and go as the patient is allowed to move about or is confined to bed The interesting part of his observation is that in those cases in which the effusion can not be so influenced, the omentum will be found to be more or less involved Dr Ross adds the account of an interesting case in which he removed the omentum about six inches below its attachment to the stomach Some time after the operation, the patient developed pain in the abdomen and a cystic collection in the remains of the omentum which was tapped The tapping was followed by suppuration in the cyst which finally discharged and the patient recovered These observations would rather indicate that, in some manner, the omentum regulates the amount of fluid in the peritoneal cavity

An important function of the omentum, and which must be apparent to every one who has opened the abdomen of a patient suffering from suppurative disease, is its attachment to the viscera in order to limit the purulent collection As the author of the paper under consideration aptly remarks, "It is like a man-of-war ready to sail to any port in which there is impending trouble" Through its great lymphatic supply it must possess great power of absorption and neutralization of the pus products in addition to the merely mechanical action of a dam

Several interesting questions are raised by Dr Ross—Does the vast network of blood vessels contained in this little-known membrane serve to hold the surplus blood during the process of digestion? Has it any special function in connection with the blood supply of the stomach, as would seem indicated by its attachment to that organ? These
important questions for the physiologist to sc
but the point most concerning the surgeon is
facility with which the immense quantity of s
thrown out after an abdominal operation is
care of by means of the blood and lymphatic su
and the lesson to be learned would appear to
necessity for care lest it be injured and its po
good thereby impaired It would seem im
that it be preserved in every way possible on
of its action as a safety-valve

Dr Ross has opened up a field of inquir
will be of much interest and advantage to
geon and physician alike

INEBRIETY QUESTION IN ENGLAN

In striking contrast with the quack cur
excitements, and sensational efforts to rea
briate in this country, may be placed
enacted in the office of the Home Secret
English Government at London recentl
Parliament passed a law for the org
asylums for the treatment and control o
After several years experience, a Parliam
mittee made an elaborate examination
ings of the act, and urged its continuan
changes

The British Medical Association app
mittee to formulate these changes, and
the Government Dr Norman Kerr w
This committee was joined by a simil
from the Society for the Study of I
British Temperance, and Woman's Ass
other Societies, together with a numb
physicians of both Army and Navy, ar
bers of Parliament and distinguished I
cians

The amendments most urgently aske
for non-criminal inebriates, (*a*) powe
and detain for curative treatment, (*b*) p
the poor and persons of limited means,
ception and curative detention of volunta
without appearance before justices. on
agreement (as in America) attested by a
sioner or clerical incumbent, (*d*) similar pr
for inebriates in opium chloral, and other n
drugs, (*c*) power to licensee to appoint a perm
deputy (*f*) separate retreats for the sexes, (*g*) p
to licensee to re-convey an escaped patient bac
the retreat direct, (*h*) power to guardians to det
pauper inebriates or to pay for their curative dete
tion elsewhere, 2, for criminal inebriates, power t
magistrates to commit to special hospitals or refo
atories

Dr Farquharson, M P, stated the object of t
meeting was to have better legal control of a class
persons who were both helpless and hopeless in mc
cases Dr Kerr followed as a representative of
British Medical Association (with its 16,000 me
bers) pointing out the failure of the present sys

of dealing with inebriates Of the 245,000 men and women committed yearly in England, fully 150,000 were for drunkenness or crimes growing out of this state Of the number, over 80 per cent were females and 60 per cent males About 7 per cent of this number were committed from 100 to 600 times for the same offence This was evidence of the wretched failure of the present means The physical aspect of inebriety had been ignored and this was the result The associations which were represented on this occasion believed that drunkenness was the manifestation of a diseased mental condition, and should be treated as such, also that all appeals to the emotions or fears by legal methods were useless, therefore they asked the aid of the Government for means to apply the measures recognized by science

Remarks were made by several persons on the same line, urging the needs of physical care and treatment The Home Secretary in reply, promised to introduce a bill with the prepared changes to the next Parliament He expressed his firm belief in the connection between inebriety and crime, and that inebriety should be regarded rather as an effect than a cause of bad social conditions Legislation to remove the causes should be encouraged It was evident that the present methods were neither curative or deterrent The time has come when we must recognize habitual inebriety as standing on the same level as insanity, with the same conditions of irresponsibility, and attended with equal if not greater dangers to the community

The question of asylums for the indigent and the practical way to establish them was mentioned, and the meeting ended It is evident that our English brethren are approaching this subject from the only true and practical side, by the means of legal restraint and medical care and treatment in organized asylums for this purpose For several years the British Medical Association have had a committee on the care and treatment of habitual drunkards This committee have advised certain legislation, and made collective statistics of various phases of the subject, and in other ways sought to instruct the profession on the question generally Several reports have been issued of much interest bearing on the prevalence and nature of inebriety This committee has been made up of the most eminent members of the profession, and has taken in a quiet way a leading part in the direction of public sentiment on this topic

It is unfortunate that the profession in this country have been indifferent to this topic, and permitted the most radical views and measures urged by incompetent men to direct public opinion As a result, we have no reliable statistics, and the most confusing medley of theories and means for treatment No wonder the charlatan finds this a rich hunting ground for fortunes gathered entirely from the ignorance and credulity of the people

The entire question of alcohol and inebriety in this country is one of the most practical medical fields of research that is coming into prominence But it must be studied along scientific lines, free from preconceived theories, and with the central object of finding facts irrespective of all possible conclusions that may follow Our English brethren have begun the work, and have set an example for us to follow

MANHOLES AS NUISANCES, THE CONTINUANCE OF WHICH MAY BE ENJOINED

A municipal government, though invested by statute with plenary powers over the subjects of streets, sewers, drainage, water supply, and sanitation, has no right to create and permanently maintain a nuisance dangerous to health and life, which nuisance consists of openings, such as "manholes," in a sewer located in a public street contiguous to the dwelling of a citizen, the manholes being allowed to emit poisonous gases in large quantities through perforated covers placed over them This is true, at least, says the Supreme Court of Georgia in the case of the City of Atlanta v Warnock decided Nov 9, 1893, where the dangerous character of the nuisance results, in all probability, not from defects inherent in the general system, but in failing to adapt it to local conditions, such as a steep grade in the particular street in which the unwholesome sewer is constructed and maintained And there is no abuse of discretion in granting a temporary injunction, in such a case, enjoining the city "from continuing said manholes in such condition as to allow the escape of noxious gases" But whether a nuisance attributable to a mistaken exercise of the legislative power of a city in adopting an unsafe or unwholesome system of sewerage is the subject matter of injunction, may be questioned

MATTERS JOURNALISTIC

There are some matters in relation to this subject that deserve attention The "special" correspondent of the *British Medical Journal*, in the issue of December 2, says

"There are two fundamental curses under which the profession in America labors

"1 The lack of independent medical journals controlled and issued by medical men for medical purposes At present almost every journal is owned by some publishing or manufacturing concern, which of course publishes it for purely commercial purposes It is easy to see that in such cases the advertising pages seek to control the reading columns If an editor shows independence, and refuses to permit the commercial debauchery of his columns, woe be to him!

"2 Cooperating with—nay, bound up with—this first misfortune, is the second—the lack of a National or unitary organization It at present seems to be impossible to arouse in the professional mind the recognition of the need of professional unity Without professional unity we can not speak to the people, criticise abuses, or encourage faint and sporadic attempts at virtue We have no singleness or strength of voice, journalistic or organic, and from the multiplicity of non-cooperating jealous societies, together with the multiplicity of trade journals, our professional disorder of speech is either a sorry laryngismus paralyticus, or a sorrier laryngismus stridulus, while the omnipresent quack and patent medicine men and the 'likes of them' crowd every farm with nasty advertisements and huge bulletin boards, and bribe to silence or a worse subserviency every secular newspaper of the continent"

It is understood that our esteemed contemporary has, by a circular letter addressed to various prominent members of the medical profession in America, offered to come to the rescue of our afflicted profession and, like another CHEVALIER BAYARD in the field or HORATIUS at the bridge, deal defiance and death to our enemies whom we are too weak to assail, for the trifling sum of eight dollars per annum So far as our own feeble efforts may avail to welcome this valiant ally to our camp to assist us in combating the evil powers, we cheerfully extend them, but in our judgment the wrongs complained of may be easier righted by avoiding abuse of American medical journalism and American medical journalists Let us elevate them, dear contemporary, by our good example The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has no "reading notices," and while it welcomes legitimate advertisements, it keeps them in the columns devoted to that purpose, and it is sure that advertisers have more respect for the JOURNAL because its editorial columns never contain them

But we read another disparaging fling at American medical journalists in the circular of a home contemporary We have received a circular from New York dated December 12, which among other interesting items of information says

"We believe that for the first time in the history of American medical journalism there is presented a journal at once independent and free from all mercenary influences That such a publication exists now in the *American Medico-Surgical Bulletin*, is due to the liberal-minded and far-sighted policy of a syndicate of wealthy men, who clearly recognize the need of our day in this regard"

After this attack on American medical journalism, the circular further says

"2 The *Bulletin* will regularly publish, twice every month, a full synopsis of the proceedings of the New York Academy of Medicine, *the most important deliberative body of physicians and surgeons on this continent*, which synopsis will include stenographic reports of *all* the papers read at the frequent meetings of the Academy and its various special Sections (on General Medicine, Surgery, Neurology, Obstetrics and Gynecology, Genito-Urinary Surgery, Pediatrics, Orthopedics, Laryngology and Rhinology, Ophthalmology, Otology and Public Health) About one hundred such meetings will occur in 1894" (Italics ours)

The Section on MODESTY appears to have been inadvertently omitted from this comprehensive program

We had before suspected that some members of the Academy secretly aspired to national jurisdiction, but this is the first official announcement of it that has fallen under our observation Or, is there a possibility that the Academy never authorized the statement?

The *Bulletin* seems to be prosperous, for its circular says "*Already over fifteen thousand physicians and surgeons in all parts of the United States have become subscribers to the Bulletin*" (Italics theirs)

The affidavit editor was evidently in when this was written, but will he swear to it?

The management seem themselves to be harassed with doubts on the subject for they say

'Should your confidence in us and in our enterprise be sufficient guarantee, you will greatly please us by filling out that part of the inclosed postal card ordering a year's subscription (in case you are not already a subscriber)"

We have retained the postal card as a souvenir of the full fledged enterprise of "the only" journal worth mentioning as an able, fearless and highly scientific publication, absolutely untrammelled by any of the selfish considerations that govern the remaining medical publications in this sinful and wicked world

CORRESPONDENCE

Treatment of Uterine Fibroids

To the Editor —In a recent editorial and correspondence in the JOURNAL, the treatment of uterine fibroids was discussed In the correspondence, Dr Franklin H Martin called your attention to the omission of his method of dealing with uterine fibroids by ligating the uterine artery and the broad ligament through the vagina Dr Martin's method avoids the dangerous hysterectomy

I would like to call your attention to an operation whic I devised for the purpose of avoiding the removal of th uterine fibroid, and which you also omitted to mention your editorial My operation consists in removing h tubes and ovaries, and then ligating the uterine artery as i courses along the sides of the uterus The uterine art should be ligated nearly as far as the internal os I did th operation first in November, 1892, on a patient with a lar uterine fibroid which could not be removed without alm certain death to the patient The myoma was so large it could not be accommodated in the pelvis, and reached a point half way from the pubic crest to the umbilicus I three months it had shrunk to one half its original size, a her severe hemorrhage had almost totally ceased months after the operation it was only one quarter of original size, and *now* the uterus is only about twice normal size She is at present in perfect health I since performed the operation twice, and Dr Waite recen performed it once So far every case has improved

The total removal of myoma is still a hazardous operati But the ligation of the appendages will check about o third of the uterine blood supply And the ligation of the uterine artery as it courses along the sides of the uterus from fundus to neck, will cut off as much blood supply as is compatible with the life of the uterine tumor My operation was performed in the same month, November, 1892, as Dr Martin's Both were done independent of each other They are the only means by which the blood supply of the myomatous tumor can be controlled It is known to observing gynecologists that uterine myomata have not a very vital growth They often become absorbed without any treatment A shock, attendant on opening the abdomen, may induce a myoma to atrophy Pregnancy frequently causes them to disappear during and after the puerperium A slight change in the blood current will many times be sufficient to reduce a myoma But when a definite nourishing blood current is suddenly cut off together with functionating tubes and ovaries, as in the operation I offer, it will be frequently sufficient to *cure* the myoma by atrophy Hundreds of myomata have been cured, at least symptomatically, by ligating off the tubes and ovaries, but my operation proposes to cut off a supply of blood much greater than the ovarian artery In fact, one can cut off as much blood supply from the myoma as his judgment dictates by ligating the artery along the side of the uterus toward the internal os A woman is more shocked and mutilated by the removal of the large uterus than she is by removal of the appendages, and the additional manipulation necessary to the ligation of the artery along the uterine sides is very little

The operation I propose will not suit all cases to avoid abdominal hysterectomy The operation which Dr Martin offers will not fit every case But by judging each case on its individual requirements, I believe that one of the two operations which look to the control of blood supply will fit many cases which previously submitted to hysterectomy—with much risk We hope your editorial, which notes that the only real curative method is the removal of the tumor, will be superseded by the operation which cures the tumor *without removal*—by atrophy Cut off the blood stream that feeds an unnecessary district and it must check further growth and result in shrinkage It should never be forgotten that an unlimited ligation should not be practiced, as gangrene may follow

I have noticed during the past year, while examining fibroids per vaginam and by abdominal section, that some portion of the tumor was being fed by an enlarged and dilated artery, e g, one of the ovarian or one of the uterine arteries were considerably enlarged The most frequent (on account of opportunity and accessibility) I found was one of the uterine arteries excessively enlarged I would often find on one side of the uterus (the side of the most enlargement), the uterine artery dilated and beating almost like the femoral The plan of the operation is to ligate that dilated artery, which is growing a tumor, whether it be ovarian or uterine

Respectfully,
F Byron Robinson, Chicago

Analyses of "Cerebrine" and "Medulline"

To the Editor —At a meeting of the Chemical Section of the Chicago Academy of Sciences, held two months ago, Prof M Delafontaine of this city, presented some facts regarding tests of the substances known as "cerebrine" and "medulline," and somewhat more in detail than in the note in the Journal of August 26 This work having been criticised in certain quarters, both as regards methods and conclusions, I thought it worth while to make a new examination of the question, avoiding as far as possible sources of error I accordingly obtained from a well-known Chicago druggist a bottle of each of the two Hammond preparations which I tested, with results agreeing fully with those of Prof Delafontaine These tests I considered, however, only as preliminary to more extended ones For the fuller tests I secured through one of our leading wholesale drug houses four bottles of "cerebrine" and four bottles of "medulline" direct from the Columbia Chemical Co, 90 South Fifth Ave These bottles came packed in a small box which was handed to me unopened Each small blue bottle was in a dark red pasteboard carton, labeled, "Sterilized Solution of "Cerebrine" and "Sterilized Solution of Medulline," with the name "William A Hammond," in *fac simile* printed diagonally across it in red ink The cartons had not been opened, which was shown by the unbroken labels The bottles themselves were sealed with some kind of white wax, apparently paraffine, and were each found to contain about four cubic centimeters of a sweetish liquid consisting mainly of glycerine and alcohol

I carried out special tests as follows

The contents of two bottles of "cerebrine" were poured into a small flask and extracted with pure benzol in two operations, using twenty cubic centimeters each time The united extracts were evaporated spontaneously, a small oily residue left was treated with water, warmed on the water bath and used for tests A portion of this aqueous mixture gave a strong test for nitrates with diphenglamine and sulphuric acid, another portion gave the nitrate test with ferrous sulphate and sulphuric acid Another portion failed to give the *nitrite* test with naphthylamine and sulfonitic acid The remainder of the aqueous liquid was saponified with sodium hydroxide and then tested for nitrates and nitrites, both of which were found in decided quantity The benzol, sodium hydroxide, sulphuric acid and acetic acid used in these tests were pure and free from even traces of nitrates or nitrites, as I found by careful special examination

The reactions given above show the presence of an organic nitrate (not nitrite) in the liquid, and the behavior on saponification is strongly suggestive of nitroglycerine The fact of the solubility of this nitrate in pure benzol is important

I next dissolved the contents of one bottle of "cerebrine" in ten cubic centimeters of water and made tests for alkaloidal bodies With solutions of mercuric-potassium iodide and iodine in potassium iodide, no precipitation whatever occurs Platonic chloride, picric acid and phosphomolybdic acid give a very slight haziness, with mercuric chloride a marked cloudiness is produced These tests I consider sufficient to show the absence of animal or other alkaloids

Four bottles of "medulline" were next mixed and extracted with pure benzol, an oily residue remained on evaporation of the benzol This residue was dissolved in alcohol and treated with ammonium sulphid A finely divided precipitate of sulphur settled out The excess of ammonium sulphid was removed with pure zinc sulphate, and the filtered liquid tested for *nitrites*, a strong reaction was obtained This test, like those given above for the "cerebrine" is characteristic of nitroglycerin and strengthens those obtained in my preliminary tests Taking all tests into consideration, I am of the opinion that the preparations, "cerebrine" and "medulline" contain nitroglycerin as their active ingredients, as stated by Delafontaine and others

Yours truly, J H Long
Northwestern University Laboratories

Uterine Fibroids —A Correction

To the Editor —In my letter in the Journal of Dec 23 1893, two errors occur, caused by carelessness in copyin the original manuscript The errors are important, inasmuch as they involve dates which make my articles appear as having been published subsequent to Profs Gottschalk's and Küstner's, when in fact my articles were published several months before theirs My letter makes Prof Küstner's article in the *Centralblatt f Gynäkologie* appear Aug 19, 1892, when the date should have been Aug 19, 1893, and Prof Gottschalk's article which reads in the letter Sept 30, 1892, should have been Sept 30, 1893

Yours very truly,
FRANKLIN H MARTIN

BOOK NOTICES

The Essentials of Chemical Physiology for the Use of Students By W D HALLIBURTON, M D, F R S, pp 166 London Longmans, Greene & Co, Chicago The W T Keener Co Price, $1 50 1893

This book has for its object that of supplying the student with directions for examining practically the most important of the subjects included in chemic physiology

It is concise and comprehensive and an excellent manual for advanced students

An Outline of the Embryology of the Eye, with illustrations from Original Pen Drawings by the Author By WARD A HOLDEN, A.M, M D Pp 69 New York G P Putnam's Sons 1893 Chicago The W T Keener Co Price, 75 cents

This monograph is the Cartwright prize essay for 1893 The drawings represent the development in the eye of the chick embryo and the pig embryo, on the days stated Although less comprehensive than the section on the development of the eye in Minot's "Embryology," yet it has its field of usefulness, and doubtless will be appreciated The writer seems not to have been acquainted with the work of O Schultze, on this subject, or that of Mihalkovics, but in the main the work shows careful and original observations in this interesting field

Manual of Physical Diagnosis for the Use of Students and Physicians By JAMES TYSON, M D Professor of Clinical Medicine in the University of Pennsylvania, etc Pp 241 Second edition, revised and enlarged Philadelphia P Blakiston, Son & Co 1893 Price, $1 50

This work is carefully written and contains all the recent additions to the subject The bacteriologic examination of sputum for tubercle bacilli and the pneumococcus are given *in extenso* The chemic examination of gastric contents are given, and directions for making a postmortem examination for purposes of pathologic diagnosis and the normal weight of the different organs are given The book is an excellent one, and although much smaller than some of the more elaborate works, will be found very useful

Essentials of Practice of Medicine Arranged in the form of questions and answers, prepared especially for students of medicine By HENRY MORRIS, M.D, with a complete appendix, on the examination of urine, by LAWRENCE WOLFF, M.D Third edition, revised and enlarged by some three hundred essential formulæ selected from the writings of the most eminent authorities of the medical profession Collected and arranged by WILLIAM M POWELL, M D Pp 374 and appendix 66 Philadelphia W B Saunders 1894 Price, $2 00

The rather elaborate title tells the scope of the book, and for those who like question-compends this is one of the best of its class

The Physician's Visiting List for 1894 Forty-third year of its publication Philadelphia P Blakiston, Son & Co

This old and well-known visiting list has retained the characteristics which have made it so popular in the past, and in addition there will be found a posological table by Dr Gould which gives the decimal dose of all the ordinary remedies Another table gives the comparative thermometric scales, and there is much useful information compressed in small space Among the many excellent lists on the market we recall none that are superior to this

New Truths in Ophthalmology as developed by G C SAVAGE, M D, Professor of Ophthalmology in the Medical Department of the University of Nashville and Vanderbilt University

This attractive title covers a multitude of papers which have been published (the most of them within the past year) in medical journals

It is evident that the author's conception of a scientific truth differs from the generally accepted definition An observation does not become a scientific truth because one man has demonstrated the fact "to his own satisfaction," a theory does not become an established principle because one man believes it to be true All observations must be verified and indorsed by other capable and competent investigators before they can be accepted as new truths And the author would have done well to postpone the publication of this book until he had received these indorsements, for we are liable to make mistakes, and even Dr Savage is not infallible When, for instance, he undertakes to develop as a new truth in ophthalmology his doctrine of "the harmonious symmetric action of the oblique muscles in all cases of oblique astigmatism" Anybody familiar with the rudiments of physiologic optics can see the fallacy of his arguments, the whole doctrine resting on false premises

Man an Organic Community, being an exposition of the law that the human personality in all its phases in evolution, both coördinate and discoördinate, is the multiple of many sub-personalities By JOHN H KING In two volumes London Williams & Norgate New York G P Putnam's Sons Chicago The W T Keener Co Price, $4 50 1893

This book is an elaborate presentation of the author's views on the origin and nature of the human personality, the phylogenic stages, the phylogenic sexual forms, the coördination of faculties and functions The forms of mental and organic coördination as shown in the normal forms, i e, the active wakeful state, the state of quiescent repose, the state of reverie, the dream state, the state of somnambulism, and induced mental and physical states. The abnormal discoördinate states are then fully and exhaustively considered and the whole concludes with an exhaustive bibliography As a scientific treatise it is exhaustive and complete, and the theories advanced of some of the complex phenomena discussed are entertaining and plausible At all points the author rather successfully brings forward observed facts to sustain his conclusions, and some well-known facts receive a new illumination from the author's method of treatment

A sample of the author's style may be useful to our readers

> We thus become conscious that the lowest elements in the organism are the plasma and the cell and that as independent organisms each cell, according to its nature guides and controls its own external and internal relations Secondly that when these cells become associate groups there are manifested not only the status of each individual's vitality, but that a common principle of personality gives a unity to the group they act in concert and that this united action is not the result of special inheritance, and a common factor in the personality may be noted by several organic results that accrue in skin grafting Thus the loss of a local group or groups of associated cells acting as a subpersonality in the individual organism may be replaced by the associate grafting of foreign skin from any other animal or man or from any other part of the same organism No matter what may have been the original nature of the skin thus transplanted, when it is made part of the new organism like an emigrant alien in the new community to which it has become attached it has to forego all the

local rights and responsibilities of its first association, and becomes amenable to and abides under the organic laws of its new condition Page 17 and again page 97

The general inference is that the newly acquired tissue accepts and becomes responsive to the forces presented by coordination Thus the new skin, whatever its source, loses its previous attributes and takes those present in the coordinate personality

This book will be a welcome one to the library of the cultured physician not less than to that of the alienist, the embryologist and the biologist

The Narrative of a Busy Life An Autobiography By Arthur Hill Hassall, M D (Lond) M R C P, etc Pp 166 and appendix, pp 82 London Longmans, Greene, & Co 1893 Chicago The W T Keener Co Price, $1 75

This autobiography is a very entertaining account of the life and services of one of the most scientific investigators of our day, in certain lines of biographic and chemic research

The author has been a writer, investigator and active worker for a period of sixty years, and he says the time had come to "review the whole of my labors, to take stock of them and so to obtain a clearer insight into their extent and nature In bringing together the chief events and incidents of my life, as far as scientific work has been concerned, I have in a measure lived that life over again, and in some respects more pleasantly than at first, because the cares and anxieties which attended some of my labors no longer existed and were more or less forgotten, and thus only the more agreeable feelings and results were recalled "

He gives among many interesting incidents, a narrative of his examination at the College of Surgeons

> "At the fourth table Sir Astley Cooper and Mr Samuel Cooper presided I had always entertained a feeling of admiration and almost of veneration for Sir Astley, and I was somewhat taken aback when I found his manner discouraging and calculated to upset the equanimity of a nervous man I remember one of the questions he asked me was 'What in case of amputation of the foreleg would determine you as to the place where you would make your first incision? I replied 'The position in life of the patient ' What! Sir he exclaimed in angry tones do you mean to tell me you would operate differently in the case of a poor and a rich man? I said 'yes,' not immediately following this with any explanation, as I was somewhat disquieted Mr Samuel Cooper then most kindly came to the rescue You mean, perhaps, that you would have regard to the man's means of getting a living afterwards? Yes I said, 'that is exactly what I did mean In the case of a rich man I should have more regard to his appearance and needs and should so operate as to allow of his wearing an artificial limb, whereas in the case of the poor man I should think more of giving him a sound stump to which a wooden leg might be attached, so that he would be able to trudge about and earn a livelihood ' 'Ah!' said Sir Astley 'that answer will be accepted ' '

The book gives a full account of the author's investigations into the food supplies and water of London under the auspices of the *Lancet*, and in the appendix three learned essays 'On the Color of the Leaves of Plants and Their autumnal Changes,' "On the Coloration of the Leaves of Plants," "On the Climate of San Remo based on the Meteorological Observations of Eleven Consecutive Winter Seasons'

SOCIETY NEWS

American Public Health Association

Report of the Committee of the American Public Health Association, "On Sanitary and Medical Service on Board Emigrant Ships"

Presented by Medical Director Albert L Gihon United States Navy, Chairman, at the session of the Twenty first Annual Meeting of the Association, held at the Art Institute, Chicago, Ill, Wednesday, Oct 11, 1893

Your Committee beg to report the following concise statement of their views as to the organization of such a sanitary and medical service on board vessels engaged in bringing emigrant passengers to the United States, as the experience and intelligence of this age make it a necessity among civilized and enlightened nations

They are of opinion and advise

1 As to the location and dimensions of the quarters for emigrant passengers, the number of berths in each, and the provisions for their ventilation and cleansing,

That the preferable location for such quarters is abaft the midship section of the vessel, that single males' quarters shall be distinct from those occupied by women and children, and that if any are forward the midship section it shall be those for single men,

That there shall never be more than two decks (properly there should be only one) occupied by emigrant passengers' berths, with sixteen feet of superficial space for each adult on the upper berth deck and twenty feet of such space on the lower berth deck, with not more than two tiers of berths on each deck, the bottom of the lower tier being not less than eighteen inches above the deck, with not less than thirty inches between the two tiers and between the upper tier and the ceiling of the compartment, to allow the occupants of the berths to sit upright,

That no solid partitions or bulkheads shall be placed in any steerage compartment to obstruct light and air,

That the framework of the berths shall be of iron, easily removable, that the compartment may be completely emptied and thoroughly cleaned after each passage,

That a steam ventilating apparatus by aspiration shall be introduced into all emigrant vessels, and

That all compartments occupied by passengers and crew shall be lighted by the incandescent electric light by night and day

2 As to the location and dimensions of hospitals on board such vessels and the number of sick berths for which provision should be made,

That the hospitals, or "sick bays" on board emigrant passenger vessels shall be at the extreme after part of the upper deck, thoroughly lighted and ventilated, with eighteen feet of superficial space for every fifty passengers, and not less than four sick-berths or hospital-cots for every hundred passengers

3 As to the number of medical officers proper for the maximum of emigrant passengers any vessel should be permitted to carry, being the maximum number able to be berthed with regard to health, cleanliness and comfort,

That there should be one duly qualified medical officer for every two hundred and fifty passengers

4 As to the professional records which the senior medical officer of every such vessel should be required to keep and his responsibility to the health authorities of the port of arrival for the truthful and professionally accurate statements of such records,

That the senior medical officer of every such vessel shall be required to keep, 1, a *List of Sick*, recording in a bound book, in the order of their admission, and on a single line, the name, sex, age, birth-place, date of admission to treatment, date of death or discharge from treatment, disease, and such remarks as may be necessary to enable the inspecting medical officer at the port of arrival to have a clear and complete understanding of the case, and 2, a *Medical Journal*, in which each medical officer, when there are more than one, shall record the medical history, including symptoms and treatment of every case, to be approved and signed by the senior medical officer at the close of the day's record, and such List of Sick, and Medical Journal, shall be submitted to the health authorities of the port of arrival, and the accuracy of the statements in such records shall be established by oath, and penalties for perjury shall be provided

5 As to the location and capacity of latrines for emigrant passengers,

That the latrines, shallow troughs with a continuous flow of salt water, shall be on the upper deck under shelter, with two water closet seats for every fifty passengers, with a proportionate number for women and children, in a separate locality near their own quarters, and inaccessible to men

6 As to the number of attendants provided for such passengers, and their duties as to policing and cleansing emigrants' quarters,

That there shall be not less than one berth deck attendant for every fifty passengers female attendants in the same proportion being exclusively assigned to the quarters for women and children,

That the berth decks shall be thoroughly cleansed every morning, by the attendants, never wetted in rainy or damp weather, when they shall be scraped, swept and freshly sanded, and in pleasant weather washed with hot water and quickly dried, the passengers being sent on deck during the operation,

That the berth-deck attendants shall be on duty night and day in rotation by regular sea-watches, and the attendants on watch be required to remove the dejecta of seasick passengers without delay, and

That benches and mess tables shall be provided and the passengers' food be distributed by the berth deck attendants, who shall take away all unused food, and carry the dishes to the pantry

7 As to additional provisions for the personal health, cleanliness and comfort of emigrant passengers,

That wash rooms under cover, with basins supplied with running water, shall be provided on the upper deck, those for men to be separate from those intended for women and children,

That fresh water for drinking purposes shall be provided in each compartment, and

That inexpensive mattresses, pillows, these to be serviceable as life preservers, and blankets shall be provided for emigrant passengers the mattresses to be destroyed after each passage, and the pillows and blankets to be steamed and washed before being again used

While other suggestions as to sanitary provisions might appropriately be made, your Committee feel that those indicated are of such urgent necessity that they should be insisted upon and put into effect without delay

All of which is respectfully submitted

(Signed) ALBERT L GIHON,
Medical Director, U S Navy, Chairman
FREDERICK MONTIZAMBERT, M D, F R C S, D C L,
Supt Quarantine Station, Grosse Isle, Que
WALTER WYMAN,
Supervising Surgeon General, U S M H S
S R OLLIPHANT, M D,
President State Board of Health of Louisiana
WM T JENKINS, M D,
Health Officer of the Port of New York

American Electro-Therapeutic Association

The Third Annual Meeting Held in Chicago, Sept 12, 13 and 14, 1893

AUGUSTIN H GOELET, M D, President

(Continued from page 949)

The Secretary then read a paper by H NEWMAN LAWRENCE, M I E E, F I Inst, London, Eng, on

ELECTRO-MEDICAL ECCENTRICITIES

In this paper I use the word, eccentricity, as meaning, "deviation from a center" The center being the object of our Association as set forth in Rule II, viz The cultivation and promotion of knowledge in whatever relates to the applications of electricity in medicine and surgery"

It is manifest that all eccentricities, all deviations from the center, are harmful to any cause and are likely to be especially so to such a cause, as ours, surrounded as it is by difficulties and pitfalls in all directions In venturing to call attention to electro medical eccentricities, I do so simply as one of a body having the cause of our Association at heart, and not in any sense as attempting to dictate or lay down the law That honest eccentricities do exist among us and that dishonest eccentricities swarm around us none will deny Perhaps, therefore, a short consideration of some of them may not be unwelcome, and may possibly tend to free the cause of electro therapeutics from these hindrances

The first eccentricity is one which I approach with considerable diffidence, inasmuch as it refers to most of the published works of writers upon medical and surgical electricity, some of which works have attained a world-wide reputation

I refer to the want of continuity between the chapters on the physics of electricity and those on the medical and surgical uses of electricity There is too often a strong and distinct line of separation between the two portions of such books On the one side, we have an abstract of, or a series of extracts from, some elementary work upon electricity, and on the other, statements about cases and their treatment, so constructed that they seem almost to avoid connection with the laws and data laid down in the first part The result of this is that the student has to face unnecessary difficulties The most important steps, which show the real relationship between the physics and the therapeutics are wanting, and he is left to grope his way among mysterious technicalities and apparent contradictions till, perchance, his patience is exhausted and he gives up the subject in disgust

The causes of this eccentricity are not far to seek Most of the earlier electro-medical specialists had to make the best of electrical knowledge in many ways inferior to that of the present day From this they extracted as little as possible, probably in the hope of avoiding complications, and thus set up a type or fashion in books upon electro-therapeutics, based upon a sort of homeopathic dose of weak physics This type others have, almost slavishly, followed

As time went on and knowledge increased more rapidly on the electrical side than the medical more advanced physics had to be dragged in, so that the breach between the two portions of the book became wider Curiously enough this breach became more marked in some cases where the medical writer, in the hope of getting over the difficulty, has called to his aid a non-medical physicist, for though, for the most part, each side of the work was thereby improved, yet the way of looking at things from the electrical standpoint seemed so different from the view taken by the medical side, that the want of continuity was lamentable and at least as prominent as before

A leading electrical paper in London recently explained its views on the subject as follows [1] "We have long endeavored to show, in this journal, that a proper study of the physics common to all branches of applied electricity is a sine qua non to medical electricians, and now that the time has at length arrived when the medical profession and their technical organs are beginning to recognize the truth of our contention, it may not be unfitting that authors of books on medical electricity should consider how far the desired end can be obtained by crowding into their text-books a few chapters upon physics, however well they may be written

'The electrical engineer, whatever branch of applied electricity he intends to adopt, has to first prepare himself by a careful study of complete text-books, often of no mean size, dealing with the physics *which form a common basis to all branches,* and surely it is necessary for the electro-therapeutist to prepare himself in like manner Medical men, when writing a treatise on forms of treatment by drugs, do not offer their readers instruction upon chemistry by attempting to include it in their books They write on the understanding that the student has already been through a course of study in the general principles of chemistry, so far, at least, as they are likely to apply to medicine Why, then, should writers on treatment by electricity add to the difficulties of themselves and their readers by endeavoring to condense the general principles of electrical phenomena into the small space which is all the exigencies of circumstances leave available in the one book? It seems to us that this effort at comprehensiveness involves the saying of either too little or, in another sense, too much

"We venture to think that the student and the practitioner would be better served by a few short sentences, recommending a preliminary study of one or two standard text-books on electricity and magnetism, with hints as to the need of special attention to points more directly bearing upon the problems and practical difficulties the electro-therapeutist has to face"

Another point is the special terms or words which are so often used in electro therapeutics, possessing little or no definite meaning and often being entirely misleading With this form of eccentricity, Mr J J Carty ably dealt in his paper before this Association last year I will, therefore, not enlarge upon it but content myself with another (short) quotation from the same journal In reviewing a book it says [2] "As the terms, galvanic electricity and faradic electricity are used, in the book, we can not close this review without again pointing out how undesirable it is that they should still be adopted in medical works Most physicists are agreed and our present author seems of the same opinion, that electricity is one and the same, however generated The currents obtained may be either continuous, interrupted or alternating and each of these forms of current possesses certain physiologic properties, whatever the source of generation be For instance, the continuous current may be obtained from a galvanic battery or from a well-commutated direct current dynamo, and the alternating from a coil, or an alternating current dynamo In the one case the continuity endows the current with certain physiologic powers, on the other, the alternations endow it with certain other physiologic powers In neither has the source of generation any physical or physiologic influence Why, then, speak of galvanic or faradic electricity, per se? Such terms, especially in so complex a subject as medical electricity, act as a stumbling block to the student, and often, in unprincipled hands, become a trap to the unwary "

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[1] Electrical Review, (London) April 14 1893, page 443

[2] Electrical Review London April 14, page 444

I will now pass from the books to the practitioner who, from the force of circumstances, is not in a position to personally administer electricity to his patients

The physician who wishes his patient to be treated electrically, and who has not the special knowledge, the time or the apparatus necessary, is often in a difficulty Here in England, the difficulty is scarcely met by the very objectionable custom that has sprung up of intrusting electric applications to the hands of hospital nurses and irresponsible individuals of both sexes who, under the cloak of "massage,' are ever ready to do anything and everything the doctor may suggest or the patient sigh for These people (though acting often from the highest and most conscientious motives, I know,) do enormous harm Few of them have had any training in medical electricity at all, and most of them possess none of the requisite qualifications Why medical men should be willing to intrust their patients to such unskilled assistants it is hard to see, but while they continue to do so it is manifest that the standard of qualification will not rise If doctors want to have electricity applied to their patients *in a proper manner*, so that they (the patients) *may receive to the full whatever advantages may be obtainable from the treatment*, they must employ, as their assistants for the purpose, people who have *undergone due preparation* for the work by a study of anatomy, physiology, electricity and electro therapeutics

What is wanted is an established *standard for medical electricians*, so that the busy physician may feel sure that any person having passed that standard is qualified for his work, in the same manner as any person passing the standard of the Pharmaceutical Society is acknowledged a qualified dispenser of drugs The present state of things is unsatisfactory in the extreme Can not some steps be taken to alter it?

I now turn to a far more serious set of eccentricities—the various forms of body appliances called electric and magnetic Most of these wonders are utter frauds, but the nature of the deception they practice is so insidious and is put forward in such a plausible manner that the public believe in them to a large extent The existence of these body appliances is for the most part totally ignored by the medical profession, but the result of this silent policy can hardly be considered satisfactory The medical profession loses, the electro-medical science is brought into disrepute and the public are defrauded of enormous sums every year I venture to think that the time has come when the attitude of medical men and electricians should change somewhat towards these absurd and useless appliances

I would suggest that authoritative statements be made of the fundamental principles of electric or magnetic generation, and that medical men and electricians, and such of the general public as we can get together to help us, shall openly condemn all appliances which do not act in accordance with those principles

The question of the genuineness or otherwise, of electric or magnetic appliances is really one for the electrician rather than the medical man The battle must be fought not on, "can the appliance do any good to the body?" but on, "is the appliance electric or magnetic as may be claimed?" i e, is it capable of generating electricity or magnetism? It is here that a definite and distinct line may be drawn *any so called electric appliance that does not and can not, by reason of its construction, generate electricity at sufficient E M F to pass into the body, is a fraud and should be suppressed by the State* Any such appliance as does generate electricity and pass it into the body (and there are a *few* such) belongs to another category It is not fraudulent, it is what it professes to be, i e, electric Its therapeutic value is of course quite another matter, and must very likely remain a matter of opinion There has, hitherto, been too much mixing of the questions of the genuineness of the appliances and the remedial possibilities of the small electric or magnetic action their vendors claim they are capable of These seem to me to be very separate and distinct questions The one can be answered by facts and well-known generally accepted laws, the other can be, at present, only a matter of opinion

In this Association we have splendid opportunities for moving in this matter, and it is scarcely possible to imagine a subject more urgently needing our attention

I would, therefore, propose the formation of a special committee of members to consider, report and act That they should issue a report and appeal to the chief medical and electrical societies or associations of each country (say Great Britain, Germany and France) asking them to cooperate in laying the matter before their respective Governments In America the appeal would probably go direct from the Electro-Therapeutic Association to the Government, though perhaps it may be thought well that the application be strengthened by the cooperation of the principal medical and electrical societies of the United States

Perhaps I may be forgiven if I conclude with some extracts from a recent article of mine [3]

'Electric is a word which to most minds conveys a definite meaning, and indicates that the particular article or instrument to which the word is applied possesses electrical properties, properties, in fact, that differing essentially from all other properties, can only be described by a distinguishing word Electric, therefore, is understood, and rightly understood, to indicate properties of a distinct and definite order, so that when a machine or appliance is described as electric we expect its main characteristic to be the possession of recognized electrical properties

"There can be little doubt that this is the general belief, and it follows that if articles are called electric that are not electric, a deception is practiced, while, if they are sold, the seller is guilty of fraud

"Further, if by calling things electric which are not electric, the price of the goods can be enhanced a hundred-fold, the fraud becomes a very gross one indeed

'There are, unfortunately, a considerable number of so-called electrical appliances which are electric in name only, being sold to the public and generally advertised so extensively that their sale is very great We think it high time that such systematic deception of the public should be stopped

"If a grocer sells a pound of margarin and calls it butter, he is liable to be brought before the nearest magistrate, and fined heavily for his deception A milkman is similarly liable if he sells as milk that which is not milk The extent of the deception in each case is probably represented by a few pence On the other hand, some electrical appliance vendors are selling as electric, things which are not electric, and deceiving the public to the tune of many shillings, and often pounds, on each transaction, and yet they get off scot free

"Surely what is sauce for the goose ought to be sauce for the gander If the deception of selling one set of articles under a false name is a fraud, punishable by law, why does not the same law hold good where another set of articles is concerned? It may be that the law does not apply to 'electric' frauds simply because such offenses were not contemplated when the law was made If this is so the sooner the law be made to include them the better

"As matters are now, not only are the public defrauded but the beneficent science of electro therapeutics is brought into disrepute, its advances are checked, its legitimate claims are looked upon with suspicion, while not a few people condemn it entirely because they or their friends have been duped They fail to differentiate between the substance and the shadow, and cry aloud that because they are deceived by the shadow the substance is not

"It may be argued that it is not so easy to tell if an article be electric or not, as it is easy to tell if butter be butter or margarin Perhaps not to the uninitiated but to the electrical expert it is as easy to prove and demonstrate on electrical goods as it is for the public analyst to declare upon articles of food We would suggest that a good way to protect the public from the various electrical swindles of this order would be to establish an authority, if none at present exists, which should decide as to the genuineness of appliances which claim to be electric, and then prosecute for fraud any persons afterwards found selling as electric, things which are not genuine

'Some such protection is a necessity, and we appeal to our contemporaries, medical and electrical, to bring their influence to bear upon the authorities, so that action may be taken to put an end to this scandalous state of things "

DISCUSSION

Dr Morton agreed thoroughly with what the author had said about the make up of electro-therapeutical text books, and the use of such terms as galvanic and faradic, yet in the latter particular we are are constantly dropping back into the use of these terms He was sure all agreed with the author that the world should be improved, but we should remember that there always will be swindlers and people who are willing to be fooled On this account, it was not legislation, but general education which would be the most effective remedy

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[3] 'Electro Hygiene" August, 1893 Article on 'Abuse of the word Electric

Dr Herdman said that the kind of abuses referred to thrive by opposition, and die by neglect, hence, legislation is of no use The American people are anxious to be humbugged and are willing to pay for it, hence, medical men should leave the quacks and their methods alone In his opinion, the man who puts an electric battery in the hands of a nurse or a family is adopting these very methods He thought there would be just as much wisdom in giving a man a vial of strychnin and telling him to take a little when he felt weak as to give him a faradic battery with the general instructions to use it occasionally

(*To be Continued*)

Will Appeal —The *News* of Ripley, Tenn , says that Dr E E Kerr of that place was disciplined lately by the Chattanooga Medical Society for attachment to a Keeley cure, and that he will appeal to the American Medical Association The Keeley business will be an interesting question for the Judicial Council to tackle

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Another "Tri-State" Medical Society —The Tri-State Medical Society, composed of physicians of Western Pennsylvania, Western Maryland and Western Virginia, met at Cumberland, Md , on Thursday, December 21, at 1 30 p m , in the City Council chamber One object of the meeting was the perfecting of the organization, which was first effected at a meeting held at Bedford Springs, in July last

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Syracuse, New York, Medical Association —The Syracuse Medical Association held an important meeting in the Business Men's rooms December 19 Dr G M Price presided, and Dr S B Craton acted as Secretary At the election which followed Dr N P Warner was chosen President, Dr T H Halsted, Vice-President, and S B Craton, Secretary and Treasurer

Dr John Van Duyn read a paper on "Rupture of the Left Ventricle," and Dr H L Eisner discussed it The report of the Committee on Permanent Rooms was made by Dr T H Halsted The majority of the Committee recommended that the Press Club rooms in the Larned Block be secured at a rental of $250 a year They also recommended that the annual membership fee be $5 The proposition concerning the rooms not being satisfactory to all, a committee consisting of Drs W Jacobson, J L Heffron, D W Murray, T H Halsted and J Van Duyn were instructed to further consider the matter and report at the next meeting

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Eleventh International Medical Congress —The undersigned Chairman of the American National Committee of the Eleventh International Medical Congress has received the following communications from the Secretary General

1 Papers to be read in any of the Sections of the Congress should be announced on or before Jan 31, 1894, to the Secretary General, Prof E Maragliano, Ospedale Pammatone, Geneva, Italy

2 The title of the paper ought to be accompanied with a brief abstract of its contents and conclusions

3 The program to be distributed will contain the titles of all the papers announced before August 31, 1893, and since

4 The reductions granted by the railway companies months ago will be available from March 1 to April 30, 1894

In the interest of such medical men as will sail for Europe before official cards will have been received from the General Committee, the undersigned proposes to supply in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value It is suggested besides, that a passport may increase the traveler's facilities Very respectfully,

A Jacobi, M D

110 W Thirty fourth Street, New York

A letter of the Secretary General's, dated November 29, informs me that "traveling documents" will be sent to the address of every subscriber on or before Feb 15, 1894, and that after that date Congressists will have to apply to the undersigned

It also contains the following regulations of former circulars

Members' dues are five dollars (money order to Prof L Pagliani, Rome, guests' (wives and adult relations) two dollars, medical students, no fees All are entitled to traveling documents

Reductions on the Italian railways are available from March 1 until April 30

A Jacobi, M D , *Chairman National Committee*

Medical Society of Berlin —(President, R Virchow) Meeting of Dec 7, 1893 Herr Th Weyl, "On the Influence and Value of Hygienic Restrictions for the Health of the City of Berlin " In the first place, he inquired whether canalization had had any remarkable influence on the state of health death rate, etc , of Berlin For this purpose he has collected some statistic data, principally the mortality in the year 1871, 1875, 1880, 1885, 1890, when the population was officially counted Then follows a line of data concerning the mo tality in Berlin judged by special causes of death and the respective ages of those who died Dr Weyl has in th manner taken reference to tetanus infantum in the fir year, to dysentery, to tuberculosis, to abdominal typhoid o all ages and to carcinoma in women above thirty years o age For the purpose of canalization the town is divided into twelve parts, each of which is called a radial system Therefore Dr Weyl made a comparative inquiry as to how mortality had been altered in a certain radial system in comparison to former times without canalization It is a pity that statistics but partly serve in observations in this direction, by the method after which they are now taken By chance, however, the comparison was now already possible for the first and sixth radial systems, using the data of the Mayor's list of deaths and births By these, the health of Berlin has much improved since canalization was first introduced, as can safely be derived from the data Dr Weyl approved some further proposals for improving the health of the city, especially he demanded health officers as in England, and health officers for the schools Women also should be admitted for these places Dr Weyl showed the necessity of these officers by the results of some little private inquiry of his, how far in some houses sewage pits were placed from inhabited rooms Some houses, however, are not yet in connection with canalization, although it is ordered by the Mayor's decree Also in regard to the health officers for school question, Dr Weyl has collected some private statements He will employ for this office the physicians designed by the city for the medical service of the poor

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Society for the Relief of Widows and Orphans of Medical Men —Dr E Eliot, President of the Society, made the following report at the Meeting of the Board of Managers held in New York, Dec 20, 1893 Eleven widows and three children of deceased members relieved, $6,610 30 added to the permanent funds, now amounting to $189,157 06, the membership increased by 13, now numbering 143, and all this at an expense of only $180 30—such is the record of last year, and it will compare favorably with that of any preceding one

In its foundation our Society had for its model that of the ame name in London, established in 1788, and such are our record and prospects that the mother need not feel ashamed of the daughter Of course their capital, $440,286, greatly exceeds ours They have legacies from 58 persons, three of $25,000 each, one of these, and the last of the three, being that of Sir Erasmus Wilson, the distinguished dermatologist, in 1887 Our benefactors number 55, most of them having contributed $150 each The name in this list leading all the rest is that of Alonzo Clark, whose gift is estimated at $20,000

According to the last publication of the London Society, the allowance to a widow is $250 and a Christmas present of $25, making $275 for the year The largest allowance to their orphans is $60 with a Christmas present of $10, making the annual amount $70 The provision in our by laws for giving each child $50 as an outfit at the time when the annuity ceases I do not find in their regulations

Their expenses last year exceeded $1,200 Of this the Secretary had $630 The amount of our expenditure, as above mentioned, is $180 30, our Secretary being allowed 'an honorarium" of $50,

Their "Grants and Expenses" exceeded their ' Total Receipts Available for Payments" by $366, this amount eing their deficit We added, as previously stated, $6,610 30 o our permanent fund Happily our by laws prohibit deficits Their membership is 312—7 less than the previous ear The number of their widows receiving relief is 58, nd the number of children 12 The large number of e former is astonishing Should our widows ever bear large a proportion to our membership as is the case with e London Society we should be compelled to reduce the llowance, or gifts to our principal must be large and numerous

A great difficulty during the past year has been the safe investment of our funds at a fair rate of interest We have had thousands of dollars for which we received but 2 per cent

The Secretary of the London Society informed me last summer that it required much effort to keep their members good, and to make additions thereto Such has been the experience of our Society For a number of years, our members according to the annual statements, were less and less I believe that for several years not more than one or two persons have voluntarily sought membership Those wh have joined us have done so through personal solicita- The energetic President of the New York Physicians Mutual Aid Association, happily one of our Board of Managers, recently informed us that not more than six out of a hundred applied for membership in that Society without personal urging Printed documents and annual statements do not bring members Physicians should make provision for themselves and any family they may leave No one in our profession in our city need die in straightened circumstances By the payment of from $15 to $20 in the Physicians Mutual Aid Association his representatives, in the event of his death, can immediately command $1,000 After a suitable probation, and not a large payment in our Society, he can provide generous relief for a widow and orphans, should they be in need of it The medical profession in no city in the world, so far as I can learn, are as fortunate in this respect as are the physicians in generous New York

Our Board of Managers is much the same as last year Two faithful ones, Drs Laurence Johnson and Wm T White, whom death has removed, we shall greatly miss Happy will it be for the Society if their successors prove equally attentive to their duties

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The Association of American Medical Colleges —Notice of proposed amendment to Sec V, Art 3 of the Constitution —At meeting of the Faculty of Rush Medical College, held 7 1893, the Faculty by unanimous vote passed the following resolution, to-wit *Resolved*, that Sec V, Art 3, of the Constitution of the Association of American Medical Colleges be amended to read as follows "From students who intend to graduate in 1899 or in subsequent classes, four years of medical study and attendance upon four annual courses of lectures of not less than six months duration each, will be required Provided, that graduates of literary colleges who have taken a course of four years, including study in the natural sciences and graduates from universities and colleges that furnish a suitable course of scientific studies, graduates of schools of Pharmacy that require three years of study and adequate preliminary education, and graduates of Dental colleges requiring two years of study and adequate preliminary education, may be admitted to the second year's work or course of lectures in the college without examination"

The present wording of Section V, Article III, is as follows "Candidates for the Degree of Doctor of Medicine shall have attended three courses of graded instruction of not less than six months each, in three separate years"

It will be observed that the adoption of the proposed amendment will require of all matriculates of the session of 1895, attendance upon four full courses of instruction before receiving the degree of M D

Recognizing that the proposed amendment, if adopted, would necessitate the formulation of a general curriculum of study for the various branches of the courses, and perchance, other necessary changes or additions to the by-laws, the President, Dr N S Davis, has appointed the following named persons to act as a special committee to prepare a new schedule of minimum of requirements, and to submit the same at the fifth annual meeting, to be held at San Francisco, at 3 P M, Wednesday, June 6, 1894

COMMITTEE

E L Holmes, Chairman of the Committee—President Rush Medical College, Chicago, Ill

Reginald H Fitz,—Harvard Medical College, Boston, Mass

Victor C Vaughn,—Dean Dept of Medicine, University of Michigan, Ann Arbor, Mich

Wm Osler,—Johns Hopkins Medical College, Baltimore, Md

Wm E Quine,—President College of Physicians and Surgeons, and President Illinois State Board of Health, Chicago, Ill

P S Connor,—Ohio Medical College, Cincinnati, Ohio

Dudley S Reynolds,—Hospital College of Medicine, Louisville, Ky

N S Davis, Jr,—Chicago Medical College, Chicago

Perry H Millard,—Dean College of Medicine and Surgery, University of Minnesota, Secretary Association of American Medical Colleges, St Paul, Minn

The Committee will hold a meeting in Chicago at the Grand Pacific Hotel, at 3 P M, Wednesday, Feb 7, 1894 Colleges, members of the Association, are requested to aid the Committee in their work by advice or representation It is particularly desirable that Colleges, members of the Association, be represented by a formally appointed delegate at the forthcoming session The proposed amendment, if adopted, marks a most important era in the history of medical education in this country Colleges unable to be represented by a regularly appointed delegate, will confer a favor by informing the Secretary of their attitude on this amendment, that the same may be submitted or made known to the convention before the final action is determined Colleges electing delegates are requested to indicate in their credentials if they have full power to act, and to furnish the Secretary the names of the delegates elected as soon as practicable Colleges are entitled to one delegate each A proxy can not be delegated to a person not directly connected with the College desiring representation

In the consideration of this question it is proper that I refer you to the recent action of the AMERICAN MEDICAL ASSOCIATION and of the Iowa State Board of Health, regarding the enforcement of the four years' course by the Colleges wishing their Alumni to receive recognition subsequent to 1895

There are at present seventy one Colleges members of this Association

Article VI, of the Constitution, reads as follows "This Constitution shall not be altered or amended except by a written notice to all the members at least thirty days previous to a stated meeting, and by a vote of two thirds of all the delegates present at such meeting"

Very respectfully submitted,
PERRY H MILLARD,
Secy Ass'n American Medical Colleges
St Paul, Minn

PUBLIC HEALTH

The Chicago Medical Society and the Public Health Bill proposed by the New York Academy of Medicine—At the last meeting of the Chicago Medical Society the committee appointed to consider the request of the New York Academy of Medicine for an indorsement of their proposed bill reported as follows

To the President and Members of the Chicago Medical Society —"Your Committee to whom was referred the Public Health bill proposed by the New York Academy of Medicine hereby respectfully report that they have carefully examined the bill and the arguments adduced in its favor They submit herewith an analysis of the provisions of the bill from which it will be seen that the bill falls very far short of the recommendation of the AMERICAN MEDICAL ASSOCIATION, the American Public Health Association, the Mississippi Valley Medical Association, and the Illinois State Medical Society

"The New York Academy of Medicine has apparently forgotten the fact that the AMERICAN MEDICAL ASSOCIATION already has a committee appointed to secure public health legislation of a much broader character, more consonant with the dignity of our profession, and more in harmony with the needs of the people

'The Academy of Medicine of the City of New York representing itself, recommends a conglomerate *Bureau,* the great national organizations composed of authorized representatives from all the States, recommend a *Department*

"We do not think the medical profession should be satisfied with any less, and we do not think the country will be materially benefited, by organizing States into separate districts, or that a board has any particular advantage over a department On the contrary, we are of the opinion that a properly organized Department of Public Health would have immense advantages over the proposed Bureau which may make rules, and must trust others to execute, which places State Boards of Health in an equivocal position in relation to the proposed District Commissioners Your Committee invite attention to the wise words of President Cleveland in his last message to Congress as follows

"'The admonitions of the last two years touching our public health and the demonstrated danger of the introduction of contagious diseases from foreign ports have invested the subject of national quarantine with increased interest A more general and harmonious system than now exists, acting promptly and directly everywhere, and constantly operating by preventive means to shield our country from the invasion of disease, and at the same time having due regard to the rights and duties of local agencies, would, I believe, add greatly to the safety of our people'

"It is believed that the bill of the AMERICAN MEDICAL ASSOCIATION meets in all essential particulars the views of the President as thus expressed Your Committee feel that the bill of the Academy if passed should be amended to provide definite qualifications for the Commissioners, as preliminary to appointment, and that the Secretary of the Board should be a medical man, and that the compensation should be adequate for the services rendered

"They are further of opinion that the provision that continues the quarantine under one officer of the Government, while the regulations governing the same are framed by the Commission, will lead to confusion, inefficiency and irresponsibility, if the Bureau of Public Health is to frame the regulations, that Bureau should have the responsibility of executing them

"Finally, your Committee point out that the courts, the Inter State Commerce Commission, the Solicitor General, the Tariff Commission the Civil Service Commission, the Superintendent of the Geological Survey, and the Superintendent of the Coast Survey now have by law ample remuneration for their services, while the medical men appointed under the proposed Act are expected to serve for a mere pittance

"But the criticisms on this bill might be almost indefinitely extended Your Committee, therefore, respectfully recommend that the Society affirm its adhesion to the request of the AMERICAN MEDICAL ASSOCIATION for a Department of Public Health, and that a committee be appointed to cooperate with the committee of the said Association, engaged in the furtherance of said legislation

"We further recommend that our Secretary be instructed to notify our distinguished confrères of the New York Academy of Medicine, that this Society prefers the bill to establish a Department of Public Health to the one proposed by them"

ANALYSIS OF PUBLIC HEALTH BILL PROPOSED BY NEW YORK ACADEMY OF MEDICINE—A BUREAU OF PUBLIC HEALTH

The Bureau Two Commissioners at Large, nine District Commissioners four Ex Officio Commissioners

Officers elected by Bureau President and Vice President to be elected from Commissioners at Large (outside Secretary)

Compensation President, $15 per day all other Commissioners, $10 per day, Secretary, $3,000 per year

Executive Committee The President and the four Ex Officio Commissioners

Duties of the Bureau Make rules for duties of Executive Committee, make rules for guidance of Bureau and employes establish rules for government of National sanitation, foreign and Inter State special departments may call conference with State Boards

Sections 5, 6 and 7 Collect and diffuse information advise the Departments of Government Executives of the several States all Health Authorities when called for or when the Bureau thinks best, to secure sanitary condition of vessels from foreign ports to prevent the introduction of contagious and infectious diseases and their spread, and to be the Government medium for National sanitary action, may make investigations abroad, and the President of the United States may on request, detail officers from the several Departments of the Government

Sec 8 Shall report facts to Secretary of Treasury

Sec 9 and 10 Shall obtain information of sanitary condition of foreign countries from Consuls and from domestic sanitary authorities, and transmit same to various public and State officers

Sec 11 (dup of Sec 6) Shall furnish information and advice to States and Government Departments when requested

Sec 12 Shall coöperate with State authorities and secure uniform system of notification

Sec 13 Shall make rules for vessels engaged in foreign trade

Sec 14 Shall issue rules and regulations to Consuls

Sec 18 and 19 Shall have authority to forbid entry of vessels under certain specified conditions and may order vessels to quarantine may send to National or State quarantine in case of epidemic

Sec 20 May exercise Inter State quarantine authority

Sec 21 and 22 Provides for purchase of State quarantines

Sec 25 Shall make an annual report, and its correspondents may have franking privilege one million appropriations

District Commissioners Sec 8 Examine into health measures employed in respective districts and report same to Bureau, and thereafter make annual report of sanitary affairs of his district

Surgeon General of the Army Execute all orders rules and regulations relating to sanitation in his branch of the Public Service

Surgeon General of the Navy Same as above

Surgeon General Marine Hospital Service Perform all duties in respect to quarantine and quarantine regulations provided by this Act

ACTION OF MILWAUKEE MEDICAL SOCIETY

The Milwaukee Medical Society also report against the bill as follows 1, It is generally acceded by physicians and sanitarians who have given the matter careful thought, and are not prejudiced, including members of the New York Academy of Medicine, that the bill to provide for a Secretary of Public Health in the Cabinet of the President, which was prepared by the AMERICAN MEDICAL ASSOCIATION, is the only ideal scheme thus far presented to settle the sanitary problem, so far as National legislation is concerned

2 All other bills are makeshifts, and makeshift legislation is pernicious legislation, as is abundantly shown in the history of our own conntry

3 The bill proposed by the New York Academy of Medicine is not claimed by its advocates to be the best solution of the problem, and is cumbersome, expensive and impracticable

4 Any legislation asked for or favored by the medical profession which is not designed for the highest good, conceived in the light of the most advanced scientific knowledge, is derogatory to the best interests of the medical profession, and as a result detrimental to the best interests of the people and country

5 No lesser office than one on a parity with the members of the President's Cabinet is consistent with the dignity of maintaining sanitary relations with other nations with the rank of the medical profession, and with the importance of best protecting life and preserving health and happiness in our own nation

6 That if this object can not be obtained at present it is unwisdom to favor legislation which by reason of its imperfection will belittle the medical profession, retard the progress of sanitation and medical science, and reflect discredit upon all who espouse it

ASSOCIATION NEWS

The San Francisco Meeting of the American Medical Association—Our California friends are "hustling," and have been since the Milwaukee meeting They are stirring up the entire profession west of the Rockies by all possible means They are instructing them respecting the ASSOCIATION and seeking to secure their cooperation with it

The *Occidental Medical Times* of Sacramento publishes each month the majority and minority reports of the Committee on Revision of the Constitution and By laws and Code of Ethics, as made at Milwaukee This will enable all its readers (and they are the brightest in the great West) to understand some of the great questions which must come before that meeting

Every indication points to a larger meeting of the medical profession than has ever met in this country before Preparations are being made for the profit, comfort and pleasure of all visiting members east of the Rockies Those who can, and do not provide for this meeting will make a mistake

Section activity has already begun by the most "live" work among the officers of the Sections Others will soon wake up, and hundreds will be laboring to prepare some work of value to present at one or more of the Sections of our NATIONAL MEDICAL ASSOCIATION —*Cleveland Medical Gazette*

MISCELLANY

Dr M J Stern has been elected a Professor of Surgery at the Polyclinic Hospital of Philadelphia Dr Stern is a graduate of Jefferson College

Hospital for Contagious Diseases —Cambridge, Mass, is to have a hospital for contagious diseases, the Board of Aldermen having voted $5,000 for that purpose December 19

A Bust of Professor N S Davis —*An excellent bust* of Professor N S Davis, by Mr Starr, has been placed in the Art Institute of Chicago, where it is much admired

The Late Sir Andrew Clark —Under the will of Dr Clark, the London Hospital will receive $2,500 for a memorial scholarship The estate, inventoried at over a million dollars, is left almost wholly to the family of the deceased

Health Commissioner —Dr Zachary Taylor Emery has been appointed Health Commissioner of Brooklyn, N Y He is an ex-President of Kings County Medical Society, and is young and energetic

The Husband Must Pay —Where there is a statute making the husband, who has means, liable for his wife's support, the Supreme Court of California holds, in the matter of Weringer's estate, decided Nov 25, 1893, that her estate can not be charged for medical services, medicines and nursing that he secured for her in her last illness, which makes him alone liable *therefor*

To Enforce the Medical Practice Act —The New York police were recently directed to take a caucus of all persons engaged in the practice of medicine in the city Each individual patrolman was instructed to copy the names and addresses from all the doctors' signs It took only two days to do the work The Medical Society will now have the data to catch the bogus practitioners There are supposed to be about four thousand legally qualified physicians in New York city

Dr A Martin of Berlin, well known in America by his papers read at the Ninth International Medical Congress, held at Washington, has received the title of Professor His father had already chosen this branch of medicine, and was Professor in Jena and Berlin Dr E A Martin was born in Jena in the year 1847 Dissertation in 1870 on gynecology, Docent in the University in 1876 He has published studies in operative gynecology, on alcohol treatment vs septic peritonitis, a manual of obstetrics and gynecology, on drainage in laparotomies, on partial excision of ovaries and tubes, on repeated laparotomy, etc

Dr Gibbs Will Not Pay His Fine —Dr Gibbs, of Omaha, has concluded that he will not pay the fine of $25 which Judge Scott assessed in the contempt case in which the Doctor was a witness in the case of the State against Frederick Mengedoht

The Doctor December 20 filed in the office of the clerk of the district court a motion to set aside the judgment, alleging that in finding him guilty the court erred He further avers that he never had a trial, and that he was not given an opportunity of making a defense, and that he was never served with an information in the contempt case

"Sanitary Day" to fall in May —It is proposed by Sir B W Richardson that one holiday every year be declared in the month of May It shall be devoted to the planting of shade trees and to discourses on the benefits of out-door life and a pure water supply It shall be called "Sanitary Day" All nations in the northern hemispheres will be invited to observe the same day, a day in November shall be observed at the Antipodes, for the same purposes Of course, the medical profession will be in the forefront of the movement, preaching the superiority of an ounce of prevention over a pound of apothecary stuff

Dr Hammond Explains His Relations to the Columbia Chemical Company —Dr W A Hammond, in a letter to the *Washington Post*, explains his relation to the Columbia Chemical Company as follows

"I was the President and a large stockholder in the Columbia Chemical Company, and I remained so as long as I pleased But, having demonstrated my right as a physician and an American citizen to hold *any kind of* property that the code of ethics and the law of the land permit, I have accepted a very advantageous and long pending offer for my stock, and am, therefore no longer connected therewith, except in the capacity of consulting chemist, a post somewhat analogous to the *one* held *in* the Apollinaris Water Company by that king of medicoethical propriety, Mr Ernest Hart"

It will be remembered that Gen Hammond was acquitted by the Medical Association of the District of Columbia of the charges preferred against him

Decay of Books —M Delisle, the principal librarian at the Bibliotheque Nationale in Paris, warns us that our modern literature is destined to perish Of the 2,000 and odd volumes published annually in France, not one, he thinks, will remain after a certain time Cheap paper is a splendid thing in its way, but this is the price we must pay for it Old-fashioned paper made from rags has stood the test of hundreds of years, as the many fine specimens of fifteenth-century printing show, to say nothing of still earlier books in manuscript Nowadays, however, paper is made of all sorts of material of a more or less perishable character In particular, as M Delisle points out, books printed on paper made from wood pulp soon begin to rot away At first the pages are covered by yellow spots, and these are replaced in course of time by holes Even so called handmade papers are often no more durable, being treated with chemicals that slowly destroy them —*London Daily News*

Disinfectant Action of Saprol —Saprol is produced as an oily brown liquid with an odor of carbolic acid Specific gravity 099 Analysis (Spindler) saprol contains 43 per cent of phenol, 53 9 of cresol, 2 8 of hydrocarbons, pyridin and other bases Gross affirms that saprol constitutes an admirable disinfectant, devoid of the inconveniences presented by other disinfectants Saprol is distributed in a uniform manner on all fecal matter which it covers with an impermeable film, the phenol and cresol which it contains penetrate little by little in the subjacent liquids To save 32 8 to 34 4 per cent of all saprol, in the case of neutral liquids 37 6 to 39 2 When the liquid possesses an alkalin reaction all the constituent parts exercise their disinfectant action In the absence of an epidemic 1 per cent of saprol will suffice to disinfect all fecal matter The yearly cost will in that case be 45 centimes per man In the suppression of epidemics, it is necessary to use 1 to 100 per cent of saprol The yearly cost will be 4 francs 50 centimes in addition per man

The fecal masses disinfected by saprol are perhaps utilized with the same ease as other salts Lastly, its mode of employment is simple It is only essential to stir the masses with saprol in the proper quantity —*Vratch*, 1893, No 30, page 836

On the Etiology of Primary Carcinoma of the Gall Bladder —F Siegert describes seven cases of primary carcinoma of the gall bladder In all he found biliary calculi Many facts show that these calculi had been produced before the tumor, and that their presence had irritated the bladder

The author was inclined to this opinion, having found that the parts of the bladder that were not attacked by the carcinoma presented many signs of irritation

In comparing facts relative to the primitive carcinoma and secondary carcinoma of the gall bladder, he arrived at the following conclusions

1, That biliary calculi always coexisted with primary carcinoma of this organ, and exceptionally with secondary carcinoma, 2 biliary calculi are one of the causes of carcinoma of the gall bladder, but are never found as a consequence of carcinoma —*Revue des Sciences Medicales*

Convalescent Homes in Berlin —The city is going to make another disposition of the public Convalescent Homes, which had existed before, but were not much used by the convalescent, owing to the difficulty of reception Till now the procedure was as follows The Committee of the Home was firstly to give his leave For this purpose, the physician in charge was obliged to give a letter after certain prescripts, in which were contained notes on the former disease and the necessity of the country sojourn, and over alimentary and medical specialties concerning the man's question When the call of the convalescent and the recommending letter of his physician had passed examination, the Committee resolved whether he should be readmitted to the Home! No wonder that the sick as well as their physicians wearied of these diplomatic proceedings, and that the Home remained without inhabitants Now the Homes (situated in the country near Berlin) shall be connected to the hospitals, so that the medical staff of the hospital can send patients to the Home without formally asking the will of the Committee This measure will but partly do As the inhabitants of the Homes not only come from the infirmaries, but also are visited by their physicians in their lodgings, or had frequented some out patient room, care should be taken that the profits of the country sojourn may be reaped also by these patients Therefore it is planned to create the place of a physician especially for the service of the Convalescent Homes, whose office in the City Hall is open from 1 to 4 P M The respective Committees of the Homes give him regular reports as to number of inhabitants and free places in the single Home On the other hand the public hospitals should daily give him information whether candidates for the Home are leaving the hospital What private patients claim reception in a Home, should also direct themselves to this office Often their former physician will reform this to health officer and give notes for the further treatment This officer soon would be the center for the convalescent service of the town He soon would learn which classes of recovering people are able to be sent to a country home, which should not, and his advice would be useful also for the practitioners in charge of the sick He would also dispose of the places in the Homes This officer should give his advice to the people and to his colleagues as much as possible directly, and should be easily accessible to all callers and decide off-hand in each case

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and officers serving in the Medical Department U S Army, from ber 16 1893 to December 22 1893

Capt W B Banister, Asst Surgon U S A is granted leave of for one month, to take effect about the 20th inst

Major Daniel G Caldwell Surgeon U S A is hereby granted absence for one month to commence about Dec 22 1893

First Lieut Madison M Brewer Asst Surgeon having reli the unexpired portion of his sick leave of absence, will person to the commanding officer, Ft Monroe, Va, for te duty at that post

First Lieut John S Kulp Asst Surgeon, now on temporar Jackson Park, Chicago Ill is relieved from further duty bus Bks Ohio, and when his services are no longer needec troops at Jackson Park will report in person to the comma cer, Ft Sheridan, Ill, for duty at that post

Marine Hospital Changes Official list of changes of sta duties of medical officers of the U S Marine Hospital Se the four weeks ended December 16 1893

Surgeon P H Bailhache granted leave of absence for five d 28 1893 To inspect quarantine ports Dec 7 1893

Surgeon George Purviance to inspect quarantine ports D

Surgeon H W Sawtelle to inspect quarantine ports, Granted leave of absence for three days Dec 4 1893

Surgeon H W Austin detailed as chairman of Board to ame revise the quarantine regulations Dec 9 1893

Surgeon J M Gassaway, to proceed to Mobile Ala as inspect 22 1893 To inspect quarantine ports Dec 7 1893

Surgeon F W Mead detailed as chairman of Board to examine dates Revenue Marine Service Dec 9 1893

Surgeon H R Carter to proceed to Brunswick, Ga for temporar Nov 24 1893 To inspect quarantine ports Dec 7, 1893 Deta member of Board to revise and amend the quarantine regul Dec 9, 1893

Surgeon W A Wheeler detailed as member of Board to revi amend quarantine regulations, Dec 9, 1893

P A Surgeon C E Banks, granted leave of absence for sever Nov 22 1893

P A Surgeon D A Carmichael to inspect quarantine ports Dec

P A Surgeon J H White to proceed to Savannah, Ga, for duty 1893 Detailed as member of Board to revise and amend quar regulations Dec 9 1893

P A Surgeon P M Carrington, to proceed to Baltimore, Md fo Dec 9 1893

P A Surgeon L L Williams, to proceed to Charleston, S C, fo Dec 4 1893

P A Surgeon W J Pettus granted leave of absence for elever To proceed to Buffalo N Y for duty Dec 4 1893

P A Surgeon J J Kinyoun to rejoin station Washington, D C 1893 Granted leave of absence for three days, Dec 4 1893 D as recorder of Board to revise and amend quarantine regul Dec 9 1893

P A Surgeon R M Woodward, granted leave of absence for seve To proceed to Cairo Ill for duty, Dec 4, 1893

P A Surgeon G T Vaughan detailed as recorder of Board for th examination of candidates, Revenue Marine Service Dec 9

P A Surgeon J O Cobb to inspect quarantine ports Dec 7 1893

P A Surgeon G M Guiteras to report at Bureau for temporar Dec 6 1893

P A Surgeon H D Geddings, to proceed to New York N Y fo Dec 2 1893

Asst Surgeon G B Young to proceed to New York N Y, for dut 4 1893

Asst Surgeon W G Stimpson to proceed to Detroit Mich Dec

Asst Surgeon B W Brown granted leave of absence for sever To proceed to Washington D C Dec 4 1893

Asst Surgeon E R Houghton to proceed to Vineyard Haven, for duty Dec 4 1893

Asst Surgeon J A Nydegger granted leave of absence for sever To rejoin station Pittsburg Pa Dec 7, 1893

Asst Surgeon W J Stewart granted leave of absence for fourteen Nov 27, 1893

Asst Surgeon Edgar Strayer granted leave of absence for sever Nov 27 1893

Asst Surgeon J H Oakley to proceed to Halifax Nova Scot temporary duty Nov 24 1893 To proceed to New York N temporary duty Dec 14, 1893 To proceed to San Francisc for duty Dec 16 1893

LETTERS RECEIVED

(**A**) Allen Ulamor Jersey City N J

(**B**) Berliner Paul Berlin Germany Baxter L K Boston, Borin, W A Red Ash Ky Blodgett, F J New York, N Y master S B Chicago Ill Barnes Ira N, Decatur, Ill Brown, Chicago Ill Boissiere G A New Orleans La

(**C**) Clarke A P, Cambridge Mass Curtis, H H New York N

(**D**) Dietrich W A Chattanooga Tenn De Vilbiss A, Toledo Dougan W McKay Otoe Oklahoma

(**F**) Fustis W C, Owatonna Minn Elwood, H R Milwau

(**G**) Gafney T H Chicago Ill

(**H**) Harsha W M Chicago Ill, Hameton B F Eml Hale G V Wheatland Texas Hemenway Stacy Eugene mond W A Washington D C Huizinga J G Holland Mi

(**J**) Johnson, W L Johnstown N Y Johnson H P La

(**K**) Kegan Paul French Trübner & Co, London, Englan G W H Muncie Ind

(**L**) Loeb H W St Louis Mo, Leighton W H National I

(**M**) Martin F H Chicago Ill Millard, Perry H, St Pa Markham H E Independence Iowa Mason C H Chath Mathers Edgar R, Cincinnati Ohio McBride, M A West Po

(**O**) Oliver J C Cincinnati Ohio

(**P**) Peters W H La Fayette Ind

(**R**) Rauch J R Lebanon Pa Reynolds Geo W Chi Richardson F W St Paul Minn Robinson F B Chicago

(**S**) Solis Cohen J, Philadelphia Pa Stockton C G Bu Swasey Edward Worcester Mass Smith, J L New York N Cohen S Philadelphia Pa

(**W**) Wingate U O B Milwaukee, Wis, Wiltrout I D, Lu West W F, Dodd, Texas Webb, J A, East Meredith N Y